

*The
Railroad
Diet*

GUY RICH CASWELL

enough to fix in the mind a mental picture of the different forms—they are all very simple and can easily be mastered in this way. The sample telegram, page 94, should be copied nine or ten times for a beginning after which you should construct a number of new sentences for practice and in which the same letter forms are worked in wherever possible. As soon as most of the forms and constructions are fairly well memorized, begin using them as much as possible in your every-day office work and a wonderful improvement will be developed in your writing within a week—this because you are falling into easy habits instead of acquiring difficult ones.

Keep the book handy for reference—use it for authority. Even after it has been in your possession for considerable time, practice occasionally on a few of the plates, or copy the telegram any number of times—this will keep you from drifting away from the proper forms before they become firmly acquired. Retain this card in the book—use it for a book-mark.

I should be pleased to receive your acknowledgement of the receipt of your copy—will you not kindly tear off the stamped card attached, fill in the date that book is received and mail it for return. Also, if you will, I should very much appreciate having you list three or four of your friends, young operators or students, whom you believe would be interested in receiving my literature.

Thanking you and assuring you of my best wishes for your success, I am,

Very sincerely yours,

GUY RICH CASWELL.

Dear Reader:—

This book has been prepared and published because there has long been a need for some such treatise among those who follow your profession. The lessons have been designed and arranged with a view to furnishing you with the greatest amount of information on the subject in the most practicable way; and because of the author's wish that you should derive the most benefit from your investment and the time that you will devote to studying the different lessons, this card is enclosed to offer the following suggestions:

Do not be disappointed if the volume does not contain quite so much specimen writing as you may have expected to find. If more of the space were used for the reproduction of different specimens of handwriting, and the lessons lacking in the matter of necessary instruction, the little knowledge that you might gain by merely looking over such displays would not be greater than you could derive from the privilege of viewing similar specimens of the "fist" wherever else they might be found. Therefore, it is suggested that you study the reading matter that accompanies each plate very carefully.

Also read so as to thoroughly understand the remarks on position and principles, particularly the latter. As concerns the matter of position, it probably will not be necessary for you to practice much change in this respect—very few office workers hold the arm flat and use entire muscular movement, so those who do not will find that their natural way of holding the pen is not much different from the position that is advocated in these instructions.

Copy the specimen words which are shown in the plates a few times, or
(OVER)

P. O. Waterhouse

THE RAILROAD FIST
or
CASWELL SYSTEM



*A treatise on the expert rapidity
of handwriting*



GUY RICH CASWELL
Author and Publisher

Jamestown, - - - North Dakota

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BATAVIA, ILL.**

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—by—

Guy Rich Caswell

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Dedicated to no other than "Prof."
(Prof. M. A. Beatty, New York City.)

INTRODUCTION

WHEN those who can remember are not included, it is probably not generally known that during the first few years after the Morse telegraph system came into use, messages were not read by sound as they are at the present time, but from machine written dots and dashes, printed or impressed on long strips of paper or tape. Copying Morse signals by sound came later; and it was no great while from the time when this practice was put into general use by telegraph and railway companies before it was observed that most of the operators, especially those who had been in the service for any length of time, seemed naturally to adopt a style of handwriting which in itself was peculiar—was particularly characteristic of the telegraphic profession. Among those who have given a little thought to the subject, how it happens that the handwriting of the telegraph operator should be so different from that of other business persons whose work may require the same or even a greater amount of writing, is a question that for many years has been puzzling.

When the average operator is asked for enlightenment as to why so many in his profession write so nearly the same, he is not as a rule able to give much explanation. If led into a little discussion on the subject, he will usually acknowledge that very early in his telegraphic career he had already discovered that the ordinary style of writing was in no way adaptable

to his requirements—not in that it lacked in any way, but, rather the reverse, in that it contained too much; consequently, before much advancement had been made, it was natural for him to arrive at the conclusion that if an operator really desired to be in the swim with the better class of his colleagues, it would be necessary to learn how to swing a reasonably fair “operator’s mitt;” not merely as a matter of following the style, but mostly in order to keep abreast with his fellow workers. The ability to swing a rapid pen without sacrificing any of the legibleness of his writing was found almost as necessary as an ability to read the noise from the sounder. But how was it acquired? If the discussion is continued he will also be likely to confess that, while acquiring proficiency in writing, he has never given much thought to the position of his hand nor to the manner of holding a pen, but always when at work he has merely “taken his pen in hand” and executed his writing in a way that seemingly came easiest to him, regardless of what he may have been taught with respect to such matters when he went to school.

As far as letter-form construction is concerned, there are probably a great many instances where many of the characteristic twists and turns are adopted through observance of the manner in which they are handled by the more experienced telegraphers with whom the student chances at different times to be employed; also, owing to the fact that he is ever favored with excellent opportunities for the scrutiny of different specimens of handwriting, such as it is his privilege to examine in messages, train-orders,

way-bills, and other simliar papers which are constantly passing through his hands, he thus gains incidentally a considerable amount of knowledge pertaining to the finer points of the art while his time is devoted only to the performance of daily duties. But not all by any means can be learned by mere observance—considerable application is required as well. Again, not all the letter forms nor the style in general can appeal to every individual who chances to enter the telegraphic field, so the adoption would never be so general were it not for the fact that there are many substantial reasons why this particular style is more adaptable than any other to the telegrapher's use. That there is a certain distinction in the style is evidenced when one considers that it is only in rare instances that persons in other lines of business, whose work may also necessitate a great amount of writing, ever acquire the "knack" of writing exactly like the operator; however, there is an explanation: The average office man, even when writing hurriedly, is, in a way, taking his own time; but the operator, when copying Morse, must of necessity adjust or conform the speed of his writing to whatever rate chances to suit the convenience of some one else, this being the man at the sending end of the wire. When the sounder clicks off the signals faster than seems possible for a "human" to put them down, the operator is almost obliged to resort to the strategy of the proverbial rabbit of which it is said that once, when closely pressed, it actually climbed a tree—an extraordinarily unusual performance for a rabbit we must

admit, but, in this particular instance, the rabbit "just had to."

The comparison is not altogether absurd. It is due to the many ways in which the telegrapher accomplishes a great many feats of the pen—feats well-nigh impossible except for those well trained in this particular craft—that a topic has been furnished for discussion and a theme for the subject of this book.

During the recent World War, different railway companies throughout the country, in order to protect the positions that were vacated by the many young men operators who responded to their country's call, established and maintained a number of telegraph schools where young women students were furnished free training in telegraphy and train operation; and the writer, who chanced to be in the service of a railway company at this time, was assigned to instructing the classes in one such institution. The superior advantage to the operator in being able to write a creditable telegraphic hand was very well known to the writer at the time of taking up his duties as instructor; consequently, with a view to having the students acquire the greatest amount of proficiency in the shortest possible time, he earnestly endeavored to have each and every one make a fitting start with the style of penmanship which was known to be best adapted to the profession. The results obtained through a little experimenting with teaching the operators' characteristic style of writing were, in nearly every instance, both surprising and gratifying.

And something more was learned—it was dis-

covered to the writer's complete satisfaction that there is a much easier and quicker way of learning how to write the telegraphic hand than by merely depending upon the chances one usually has for picking up the art little by little here and there. Where a period of several years is likely to be required for the gaining of no more than a few minor points, such as one is entitled to learn within a few weeks' time, the accomplishment tends toward being altogether too slow and uncertain; and it was in consequence of these conclusions, which were arrived at while the writer was actually teaching this system of writing, that the idea of writing the theory, or a treatise, on the subject of telegraphic chirography was conceived. And it has been realized that such a treatise, in order to meet with any amount of success, must necessarily be considerably different from any book of the kind ever before published. However, in designing and arranging the different lessons, the object in view has been, not especially the gaining of any remunerative benefit from the venture in a business way, but, more particularly, pastime and study of a subject in which the writer could not but feel a profound interest; and if, in the course of time, he should be convinced that his efforts have brought about even a little help to a few among the army of his fellow workers, he will feel that not one moment given to the work has been in vain.

But the question, "Why is it that so many telegraphers write so nearly alike?" has not as yet been answered; and a singular feature of the case is that it matters not whether the query is put to one who

writes a beautiful telegraphic hand or to one less accomplished—the answer, if any at all is given, is never sufficiently enlightening. Besides furnishing proper instruction for all who would learn to write rapidly and well, it has been the purpose to include within the pages of this small volume the complete solution of a problem which has long been an enigma to a considerable number, both in and out of the profession; and it is earnestly believed that the reader who may consider it worth while to give the greater part of these lessons a reasonably careful perusal will find that the mystery concerning the “Railroad Fist” is herein explained to his entire satisfaction.

THE AUTHOR.

JUST WHAT IS MEANT BY LEGIBILITY

BECAUSE of the writer's wish to have this work entirely complete, there will be found in the pages that follow, especially where capitals are treated, several instances that allow of more than one handling of the same character. In order to leave the reader somewhat advised in the matter of determining which to consider best wherever there is a variety of forms from which to make a choice, frequent comparisons have been made with respect to the legibility of the different styles; and so, before setting forth any actual instruction in writing, an attempt is made to render the significance of such discussions somewhat clearer by bringing the subject of legibility into the limelight for a preparatory consideration.

When criticising writing from an easy-to-read point of view, it appears to be well-nigh impossible to find specimens that possess any quality other than merely that of legibility—that is, as the term is usually applied. However, by way of calling attention to the extension of meaning which the definition implies, the following will serve as an illustration: thus, it might be said that, with very few exceptions, all business signs are perfectly legible, or, at least, they usually can be read without the slightest difficulty; but, in addition to this, a great many sign displays are found which so obtrude themselves on the passer-by as to almost compel attention. They have what may be termed a “calling-out” feature—the extent to which this peculiarity is at any time in evidence may sometimes be due to some one's good luck in

the matter of choosing suitable colors and style of lettering, but the amount of its presence usually depends upon just how well this feature in sign writing has been understood by the painter. A dealer in hardware, wishing to make the nature of his bus-

HARDWARE

iness known as widely as possible, would not likely consent to having the lettering of a sign done in a style, tall, narrow, and slanting, like that of the first example illustrated, for, even though the workman-

HARDWARE

ship were perfect, the desired effect would not be obtained. On the other hand, a glance at the second illustration should without argument be sufficient to convince even one entirely unacquainted with the business that this style would serve the purpose considerably better; although, from one point of view, it cannot be claimed that the lettering, considered merely as a design, is any more legible than that of the first example. It is only in that Fig. 2 seems to "cry the wares" so much the louder that the difference between the two from an advertising standpoint is so great as to leave no allowance for comparison. No dealer with an eye for business would be so unwise as to sacrifice this voicing feature in

his sign display merely for the sake of decorating the front of his establishment with an example of something more unique and fancy in lettering.

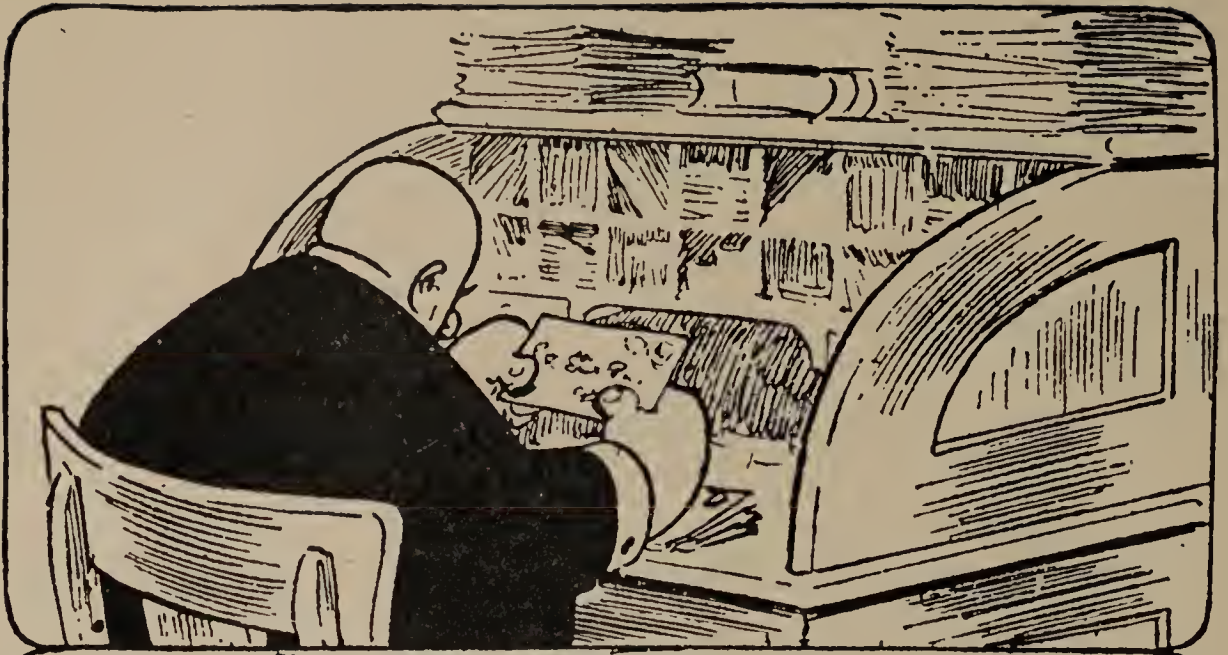
Business writing should, to a greater extent than most people realize, conform closely to what has just been said respecting the lettering of signs. That which can easily be read is usually termed *legible*, but good business writing in order to comply with all requirements should, like the sign, possess the same additional feature; that is, not necessarily the greatest amount of uniformity and other requirements of exactness, but, rather, so much distinctness in every way that the words to the one who reads will seem almost spoken instead of written.

The writer has no hesitancy in setting forth the claim that the telegraphic hand, of which this volume treats, is endued more than is any other style with this desirable feature in up-to-date business writing; and he also maintains that where one has acquired the knack of putting down a good "operator's fist" with a reasonable amount of skill, his ability as a penman will place his worth in the business field considerably above that which is held by those who remain in the rut through clinging to old-fashioned rules respecting slant, spacing, uniformity, etc. Little do hurried business men or worried officials care for "finicky" things in writing when perusing such important letters and documents as usually claim their attention—the context only, which must be reached through the medium of writing, is the issue here that is paramount to all else; and, in consequence, the style of writing permitting at a glance the greatest

conception of thought is naturally the one that serves the purpose best in every way. In brief, the desideratum in business writing is the maximum degree of legibleness, regardless of conflicting rules and traditional styles.

The foregoing has not been prompted by prejudice. Where one possesses the inclination and can, without too much sacrifice of other interests, devote the amount of time necessary to the attainment of a beautiful, ornamental style of penmanship, the writer would not advance one word in disparagement—proficiency in this line when once attained is certainly an admirable accomplishment. But there are certain restrictions. The field where the art may be displayed to advantage is assuredly not where business requirements are foremost; and so, one should never become so zealous as to make a practice of writing for exhibition where such displays are altogether out of place. The penman who does not see this mistake, no matter how meritorious may be the product of his quill, will meet with many disappointments by allowing himself to suppose that appreciation will always be shown for his artistic attempts. Through kindness of NEA Service, Inc., we are permitted to reproduce an Everett True cartoon which well illustrates the point.

Considering the matter of fancy penmanship as it is concerned in the telegraphic profession, it should be realized by the student that the beautiful, ornate style, such as is usually displayed in penmanship-school catalogues, is not intended to be written faster than from ten to twelve words a minute; and when even



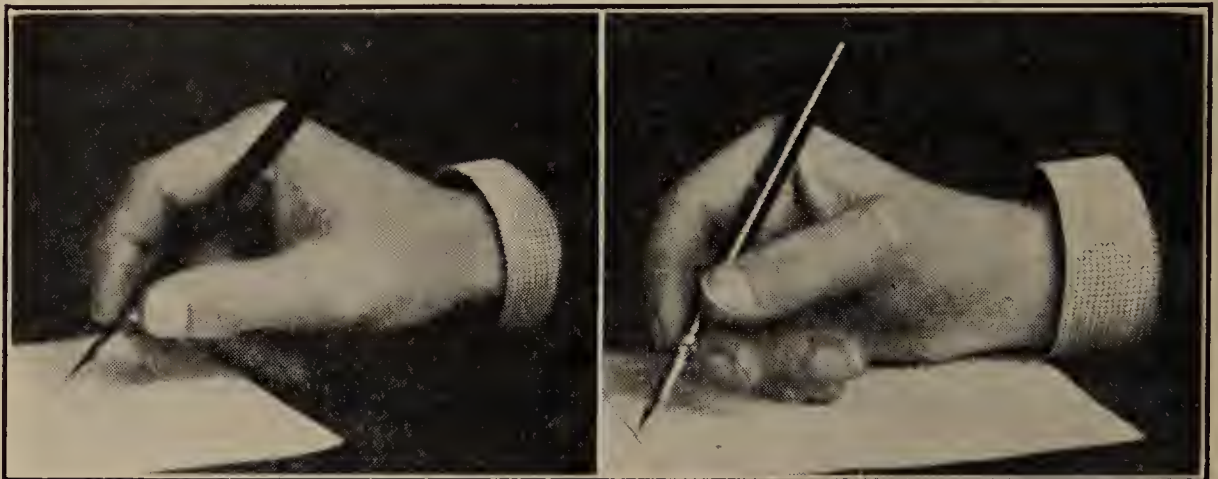
a professional attempts to write this style at a speed which is no more than ordinary among the telegraphers, he is seldom able to produce more than an illegible scrawl across the page.

Following this, it is easily observed that the so-called "business hand," such as is taught in most business colleges, differs but little from the ornate style, except in the matter of shading and less elaborate flourishing; therefore, when it is understood that the work of the telegrapher often necessitates an ability to "slap it down" at the rate of, say, "40 per," it stands to reason that the operator who strives to acquire enough proficiency in writing to enable him to copy Morse in a creditable slanting hand, is certainly laboring against heavy odds.

To conclude, the student's first promise of success is evidenced when he shows an inclination to entirely disregard most of those writing principles which he learned at school and begins to adopt a way of manipulation which enables him to wiggle and zig-zag his stylus along as fast as prestidigital tactics will allow, yet not without the possibility of leaving in its trail a line of script that is perfectly legible—and beautiful, too, to the eye that is trained and labors where such conditions and requirements exist as have been responsible for the creation of the style.

POSITION

ASIDE from rapidity of execution and legibleness, the railroad style of writing possesses other redeeming features which cannot always be taken advantage of by adherents to the ordinary slanting style, and foremost among these comes the matter of position, or the manner of holding the pen. Among those in the ordinary walks of life there are very few who ever very long adhere to the practice of holding the pen or pencil in the manner that is usually taught in the school and the college, but there are very good reasons why this advocacy of the pedagogues is disregarded to so great an extent. The full arm movement, so generally supposed to be the "only way," is found essential only where it is desired to produce in the style an abundance of ease and grace; and when exactness must be maintained, its use is possible only where the matter of time is hardly taken into consideration.



Where the maximum speed in writing becomes necessary, such as is most of the time a requirement

in the operator's every-day routine, the full arm movement can play only a subordinate part—that of an assistant in carrying the hand from place to place over the writing surface, and, occasionally, in executing some of the larger capitals; but the actual writing must be accomplished almost entirely with the fingers and hand. The average telegrapher penman, writing in his accustomed way, seemingly brings into play a considerable amount of arm movement, but this motion is really only sympathetic. The energetic working of the fingers and the swinging of the hand necessarily influence a unisional movement in the lower arm because one is but part of the other, but by far the greater part of the energy actuating the movement is found to function from the muscles that control the hand and fingers.

There are but very few telegrapher penmen who ever use the full arm movement, and those who do are by no means the best scribes since this mode of writing is not so well adapted to such speedy requirements; however, it need not be taken for granted that no arm movement whatever should ever be resorted to. The best railroad penman is allowed to take advantage of an occasional full arm swing, as he sometimes does, especially in the handling of certain capitals where it seems desirable to execute them on liberal lines and where the action is not in the least restricted, but the operator's full arm movement differs somewhat from that of the ornamental penman's—the forearm is not rolled in so much towards the body, so as to bring the wrist level, but is held more on the quarter in practically the same position as when

only the fingers are employed. The truth remains, nevertheless, that, when writing at utmost speed, it would hardly be possible for the operator to resort to any arm movement at all were it not for the fact that when this style of writing is used, one is not strictly confined to any particular exactness; consequently, when the momentum of the arm is responsible for an occasional loss of control, the writing can still conform with practically all requirements.

There are two very good reasons why the penman who experiences a demand for speed so great as does the telegrapher, is well-nigh compelled to restrict his way of manipulating the pen almost entirely to finger action: First, when the pen is grasped in the act of writing with the finger movement, there are no requirements in the position where a perfectly natural posture of the hand cannot be maintained at all times. The position need not be educated—no long and tiresome drills are necessary in order that the muscles may be trained in holding the pen in an unnatural manner merely for the sake of gaining some minor advantage, which, after being attained, is of use to no one but the artist or the professional. Second, when full arm movement is attempted, the bulk and weight of the forearm is found too great to admit of its being jerked back and forth—round and about, in such manner as is necessary in order to execute this class of rapid writing. Each rapid movement in any one direction gathers too great an amount of momentum to admit of change to another without an accompanying loss of speed or the loss of control. The fingers being lighter and more jointed than the cumbersome

arm are better suited to the accomplishment of those rapid twists and turns which require actual dexterity and skill for their execution. Again, the penman who tries always to use the full arm movement is frequently handicapped in doing his best writing where, owing to crowded desks or unsuitable writing conveniences, it may not be an easy matter to provide the arm with the necessary amount of room or support; also, the action can be considerably hampered by an excess of clothing or a closely fitting sleeve.

Where the movement employed in writing is actuated by the hand and fingers, there are two directions in which the point of the pen is easiest carried; that is, considering that the writing line is being maintained at nearly right angles with the forearm. The first is from lower left to upper right, the action being produced by just a little side rocking of the hand; occasionally too, by a slightly swaying instead of a rocking movement. The second is up and down, vertically from the base line, the action here being produced by a slight bending of the fingers, the middle joints of the two resting upon the holder being mostly used as the hinge. Any movement produced by doubling up the fingers and extending them in and out from the direction of the palm should be avoided—it proves altogether too slow, awkward, and tiring. When the action is properly employed, the fingers will force the holder towards the thumb, this member always giving way to the repeated pressures and always following the holder back after the fashion of a spring, the office of which may be considered as a support for retaining the holder against the under side of

the forefinger. Because the sense of touch is always highest developed at the tips of the fingers, there is a corresponding advantage in pen control when the thumb and forefinger so rest against the holder that the points of contact fall close to their ends; also, the grip on the holder should fall rather close to the pen socket.

The weight of the hand is usually distributed along the side, although the center of control may be either near the outside of the first joint of the little finger or on the ball of the joint at the base of the hand, this being mostly a matter of whichever way comes easiest to the individual. It is probable, however, that the greater percentage of the most skillful class prefer to fulcrum the weight on the little finger, but not without an occasional shifting to the ball of the hand when it is desired to execute some of the larger swings, and at which time the wrist is allowed to become a free and easy working joint so that the hand can swing instead of rock from side to side. Instructions for writing the free arm movement require that the top of the wrist shall be kept level or nearly so at all times; but where the work is accomplished with the hand and fingers, the position is such that the top of the wrist inclines downward toward the outside. The angle may be as much as 45 degrees—a little variation one way or the other is of no material consequence.

When the work is performed in accordance with this system of writing, it is in no way necessary that the pen should skim over the surface of the paper in such way as is the requirement when the free arm

movement is skillfully employed; but, rather to the contrary, it should be handled identically as is the ordinary pencil when only the hand is supported.

Where one writes naturally with a heavy hand, the pen is likely to sound an occasional scratch, but to this there is no particular objection—if the correct position for the proper execution of the style is maintained, there will be a tendency to pull rather than to push the work, and in consequence the pen-point will incline in the wrong direction for piercing the paper when the slightly excessive pressure is placed upon it. There should be just enough pressure upon the pen to serve in slightly steadying the hand. Many of the highest grade specimens of telegraphic chirography show marked evidence of firmness in the grip and pressure.

Aside from those who make a study of penmanship and strive for professionalism, there are very few who ever give heed to any instructions concerning the relative position of the body to the desk, and nearly all persons employed in business offices are included in this class. As a rule, the telegraph operator sits squarely facing the “bench,” but with the writing line traveling the pen along anglewise away from the body, the line of script following a direction that is a little less than at the right angles with the forearm. If the writing is backhand, the base line is usually parallel with the edge of the desk. The amount of slant given to the style is governed, not so much by any change in position, nor by any attempt at carrying the lines to a particular angle, as mostly by the different angles at which the writing line is main-

tained, the position of the arm and the hand remaining the same at all times. The more the paper is turned toward the left, the more as a natural consequence will the writing lean toward the right, and vice versa.

In the matter of squarely facing the desk, it is probable that the telegrapher educates himself in this owing to the necessity of his always keeping a position that will enable him to reach the telegraph key without shifting or turning the body. When only the act of writing is considered, there is always a slight advantage in keeping the right side of the body a little nearest to the desk—the arm and hand is seemingly brought into the most comfortable and natural position for placing the pen upon the paper in the act of writing; also, more of the table room is given to the hand that actually performs the work.

The cut at the beginning of this chapter illustrates two entirely different writing positions. The first is the full arm, or muscular, showing the position of the wrist to be nearly level, while the writing is “pushed” along the line. The second illustrates how the hand is held where the finger movement is employed; also, how the action is more of a trailing rather than a pushing movement. The hand perhaps does not always rest along the side quite so much as the illustration would have it appear; however, the greatest freedom of the writing fingers can be exercised only when they are not in any way hampered with supporting the weight of the hand.

PRINCIPLES

CONCERNING the matter of style, it is found that there are really too many different letter forms in use to allow of selecting any one particular alphabet and setting it forth as a standard; and inasmuch as the individual tastes of the thousands using the system have a tendency to create a great many variations among what are apparently intended to be the same forms, it is not always an easy matter for one to decide upon just what might be best to adopt; consequently, in the preparation of this treatise the intention has been, not especially to offer any of the specimen writing as a standard for adoption, but, rather, to design a series of lessons that will teach the principles of the system from instruction concerning mostly the "knack," or manner of execution. When the proper way of manipulating the pen becomes the practice, a closer resemblance to the usual forms will follow than would otherwise result, even if the different letters were drawn from copies. Furthermore, in working out the principles of the art rather than devoting the time merely to accumulating and copying different specimens, it has been possible to eliminate a great many fads and fancies which from another viewpoint would not have been recognized as such.

It develops then that there actually is a certain amount of science connected with the writing of a good "railroad fist," but hardly one person in a thousand who employs the style is ever aware of the scientific principles involved in its execution. Few,

if any, have ever learned the art through study and application of its governing principles—it has previously been explained that, when the penman is not too stiff fingered and possesses just a little adaptness for penmanship, the knack is usually acquired simply by allowing time to take its course until the demands, such as are invariably made upon the average telegrapher, result in his adopting a way of writing best suited to his requirements; and this regardless of how the facility is acquired, whether by observing to some extent the way veterans write, or wholly through following the lines of least resistance. The reader should not deduce a conclusion from the foregoing that the telegrapher penman acquires any great part of his facility in writing by imitating the style or learning to copy it as a form. Learning the knack is the real accomplishment; and when this has been acquired, the style and most of letter forms follow as a natural consequence—in truth, the points of advantage in many of the telegraphic pen characters cannot always be fully appreciated before the correct way of manipulating the pen has been learned, whether by study or acquired from habit.

The telegraphic script is the outcome of neither fad nor chance. Merely taking advantage of every easiest and quickest way in the manner of execution, rather than striving to produce any special letter forms, has more than all else been resultant in the creation of the telegraphers' characteristic style of writing. And there is involved a single fundamental principle which more than any other feature is responsible for most of the peculiarities of the style,

the explanation of which is set forth in the following:

Without overlooking the importance of what has been said concerning position, the student must also bear in mind the fact that, in the formation of the script, the pen very seldom is carried in a backward direction, neither directly nor diagonally, except in those instances where it would not be possible to construct the letter forms in any other way. With every stroke, both up and down, there should be a prevailing tendency, especially in the construction of the lower case, to advance the pen or pencil across the page in a direction coinciding with the course of the writing. The movement may be likened somewhat to that of a sailboat in the act of working its way against the wind by what is termed "tacking"—back and forth across an imaginary line running in the direction desired to travel—every trip across the line advancing the vessel considerably beyond the point where it crossed the time before.

Another example, which probably somewhat better illustrates the theory involved in the telegrapher penman's mode of writing, is oftentimes unintentionally enacted by youngsters at play with an ordinary toy wagon when the one who chances to take part as passenger attempts with stick in hand to trace his name or other wording in the sand or dust while his conveyance is being drawn steadily along by his companions. While it is not at all probable than any thing in the least artistic has ever been accomplished through such prankish endeavors, the fact remains, nevertheless, that the action here employed may quite well be compared with the underlying principle of

the telegrapher's method of writing. The pen, like the urchin's less wieldy implement, while being carried steadily along in the direction indicated by the writing line, leaves in its trail a line of script which, owing to the conditions under which it is constructed, must always retain those characteristics peculiar to the style—there is but little halting or “backing up the cart” for allowing the line to be carried towards the rear; and, consequently, in order to have little or no interference with the continuity of the movement forward, the backward trips when not entirely dispensed with must be executed with genuine dexterity. In addition, all letters must be so formed that the finishing stroke of each will be, as nearly as possible, the beginning of the next. By this is not meant the “finishing curve,” such as is attached to all lower case letters in the ordinary slanting alphabet, but the finishing line in the letter itself—the body, as it is called.

Aside from the possibility of accomplishing perfect legibility without resorting to the practice of carrying the pen backward except where positively necessary, there are obvious reasons why it is advantageous to eliminate those little backward trips almost entirely. Because they seriously interrupt all forward progress by turning the moving pen directly away from its course, they consequently became a serious impediment to the accomplishment of “railroad speed” in writing. They not only check the movement, but also necessitate traveling the pen a greater distance “out of the way,” and this, obviously, requires a line that is correspondingly longer for describing the different characters. Again, the “ratchet

action," which their execution requires, is not at all in accordance with the way in which the expert railroad penman so successfully waves and zig-zags his lines across the page.

A second important practice to be observed—one that is closely adhered to by those who write with the easiest swing—is to eliminate all positive stops of the pen wherever possible to do so without impairment to the legibility of the characters. This practice is resorted to in the handling of capitals and small letters alike, and its employment, like the "tacking" principle, is somewhat responsible for the characteristic appearance of the telegraphic script, although its effect is restricted more to certain characters rather than to the writing as a whole. Apparently, some of these positive stops do not check the movement of the pen nor the rocking and swaying of the hand so much as others—those interfering with the lateral movement being the ones which the rapid penman tries mostly to eliminate; and, while there are instances where he merely turns a rounding corner instead of a sharp one, he usually accomplishes the trick by making little loops where otherwise abrupt angles would be used. The reason for this is simple; the explanation being that, when diverting the course of the rapidly moving pen, the feat is more easily and quickly accomplished by the employment of a swinging movement rather than a positive stop—the latter way is more opposed by inertial resistance, both in checking the motion and in starting it a second time. Humoring the inertial resistance is one of the important secrets; and so, to apply the principle here,

a small loop is seemingly made with a single effort, while to turn a sharp corner requires two.

In following the practice of eliminating every abrupt turn and positive stop wherever possible, many of the best "ink slingers" in the profession frequently bring into play another little sleight which, while not so important as some of the others, is time saving because, like the elimination of the positive stop, its employment makes it possible to execute certain characters with a smooth and rolling movement where a halt or jerk would otherwise be required. In explanation, it is necessary to state that when the operator employs his favorite swinging or circular movement, the hand is invariably circled, or rotated, towards the left. Now, if all characters were to be formed after the fashion of the ordinary slanting style, he would too frequently find it necessary to check this circular movement and to start the pen in the opposite direction; and so, rather than do this, as would be necessary if any letter were to be started with a left curve, an inclination is shown to lift the pen and circle round the letter, so that the writing line is separated and the start made backwards from the top.

To the reader who has never made any close study of the principles of penmanship, it may be well to explain the exact meaning of the terms "right curve" and "left curve." A right curve is so called because the bend is towards the right, and when the line is started at the bottom, the circular movement used to describe the curve is naturally towards the left. A left curve is the opposite of the right, both in the

in the following lessons. Again, the habit of lifting the pen in some places and not in others is occasionally due to crowding or binding of the fingers; and while this feature possibly accounts for a share of the irregularity in the breaks, it is not of enough importance to be given any great consideration. The operator usually swings his arm too freely to admit of the fingers binding to any noticeable extent.

No set rule can be given that would serve for authority on just how little or how much the writing line should be broken—this must depend upon the individual, his tastes in the matter of writing, and upon the amount of freedom he is able to exercise in handling the pen. It can be said, however, that the writer who lifts his pen only occasionally when performing ordinary work, usually resorts to the practice considerably more when the script is more compact than his customary style. He finds that the privilege allows him greater freedom with the pen; also, that the compact style is much more legible when there are plenty of breaks between the letters.

As the correct handling of each and every character has been given separate attention in the pages that follow, it is hardly necessary at the present time to go further into detail upon these particular points. In what has already been said with respect to small *o*, *c*, and a few of the others, the intention is merely to imply that whenever the execution of any character is made easier by lifting the pen and approaching at an angle differing from the ordinary style, it is allowable to take such advantage; although a

“choppy” appearance given to the writing is not meant to be encouraged.

When any of these points of advantage are viewed as affecting the characters singly, the time that is gained through the adoption of these devices, which border so closely on sleight of hand, may ~~to~~ some readers seem inconsiderable; or, allowing the most, too nearly infinitesimal to serve in any way as an aid. But those inclined to be skeptical must bear in mind that this is a treatise dealing with a fine art—a very fine one. If handwriting were on a larger scale—for example, if it dealt with characters of about blackboard size or larger—then would the advantage of all these “tricks of the trade” be more apparent; and, without a doubt, the use of them, if not generally adopted, would be considerably more resorted to by every one who wields a quill.

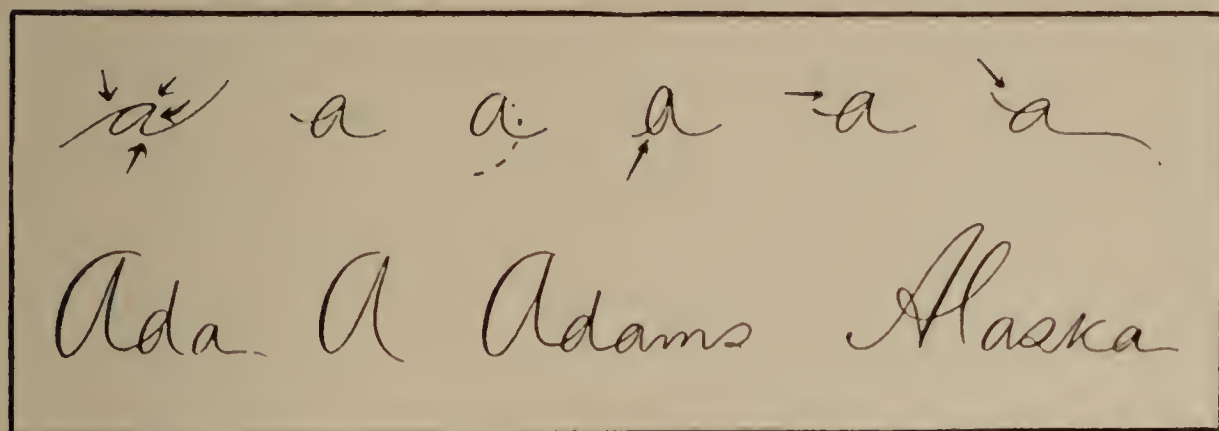
THE ALPHABET

IN THE choice of an arrangement for the following lessons, it has been decided that treating the different characters in their alphabetical order is a plan which, in a treatise of this kind, should serve all purposes quite as well as any other scheme that might be adopted; and as there are several points concerning the proper handling of the letter *a* that tend to attach more importance to this character than is the case with many of the others, its assignment to first place is probably no less than where its exposition properly belongs.

Excepting the letters *d*, *g*, and *q*, which in form begin nearly the same, the lower case *a* offers a somewhat better opportunity for making use of the operator's sleight of hand in writing than is found in almost any other letter of the alphabet; and so, with a view to having the student start in the right direction, it is believed advisable to dissect and treat the initial letter somewhat more extensively than any of the others—it should follow in consequence that very much of what is learned pertaining to the execution of one of the most important characters, will be of considerable benefit whenever the same principles are to be applied elsewhere.

An ordinary lower case *a* is first shown with arrows indicating the features that tend to keep this style of the letter from harmonizing with the telegrapher's way of writing; and, next, the telegrapher's *a* which illustrates the manner in which the undesirable features are eliminated—a form of the letter

which might well be termed the "undershot style." In the first example the letter begins with a *left curve*



and comes to a *positive stop* at the top. The first curve is then *retraced* about half its length, and, when the body of the letter is formed, the line is again carried to the same point at the top where it comes to a *second positive stop*. Next, the line is carried downward with a *backward slant* before it is allowed to travel forward towards the finish or the next letter whenever one happens to follow.

In the telegraphic style, it can be observed that the initial stroke is a right, not a left curve, so that when a circular movement towards the left is employed, it is not found necessary to check the movement of the pen before it is brought to the top of the letter the second time; and, with the next downward movement, the line is slanted forward instead of backward. Following this design, the operator finds it possible to construct the letter with the elimination of one positive stop and one unnecessary backward trip; and, at the same time, to complete the entire construction without the interruption of his favorite circular movement of the hand, which is always towards the left.

It is just these little economies in time and effort which, insignificant as they may appear, enable the telegrapher penman to construct the letter with a saving in time of about one half; also, since the pen starts in a forward direction after leaving the top of the letter the last time, it is more easily swung into the letter following than is the case where the backward slant is employed before making the lower turn at the finish.

In a foregoing paragraph the reader's attention has been called to the fact that in many instances the saving in time and effort that the operators are known to take advantage of in their way of writing is so small as to be almost indiscernible, and in one way of handling the lower case *a* there is found a very fair example of this singularity, the explanation of which is as follows: It is frequently noticeable that in the handling of this letter, there is a tendency to keep the body of the construction quite flat; that is, all the curves that go together to give the letter form, are kept as nearly horizontal as can be done consistently without impairing the legibility. The advantage of this is due to the fact that the forward movement of the pen is not so much arrested when the curves in the letter are described longitudinally with the writing line as when the direction is turned and the curves run more perpendicularly, as is obviously necessary when the character is built on more of a "stand up" plan. The plate gives a few examples that illustrate the manner in which the build of small *a* is affected, depending upon the direction from which the pen approaches.

Another feature in connection with *a* that is of considerable importance, not only on account of its appearance here, but because of its frequent application in other places, has concern with the starting stroke, which, to those not giving the matter thought, may at first seem somewhat superfluous. Considering that one of the principles of this style of writing is to dispense with nearly all lines that are not absolutely necessary, the question might arise as to why this apparently unnecessary stroke is used at all, especially when *a* chances to be the beginning letter of a word and at which times it would seem that starting the letter at the top, like capital *a*, would cover all demands. It is here necessary to call attention to the fact that before any letter can be described in any location, the pen must necessarily "come from somewhere;" and as the hand is usually in motion before actually carrying the pen into the letter, the beginning stroke is no more than the course over which the pen would travel were it not allowed to touch the writing surface before reaching the point at the top; consequently, nothing would be saved in effort were this line not to be described; it is merely the course over which the hand carries the pen when swinging it into position for the beginning proper.

There is no great difference between the small and the capital *a* except in size; the capital, however, must stand up more than the smaller letter so as not to occupy too much line space. Where one prefers, the capital may be started from the bottom with a right curve, like the lower case letter, but the most common way is to begin this letter with the down-

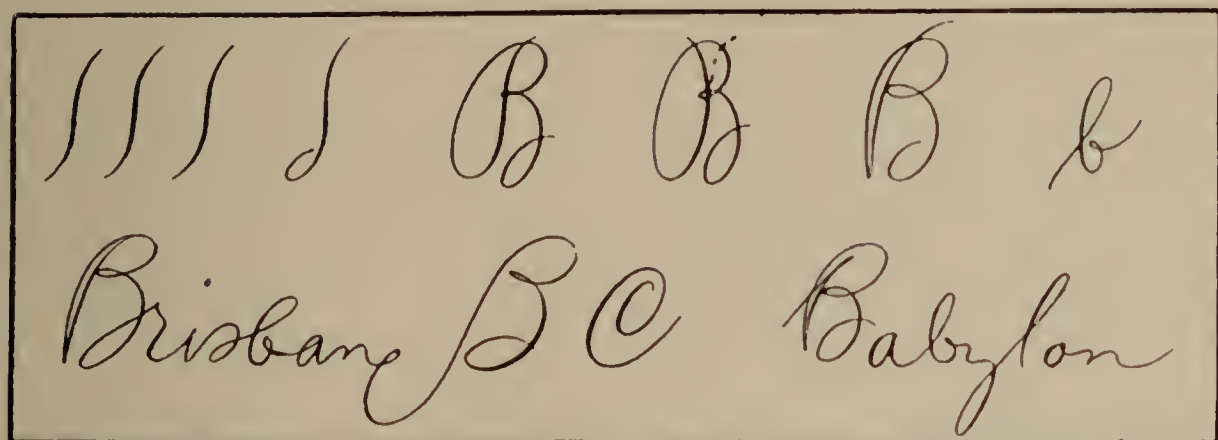
ward stroke from the top. It is not the purpose of these lessons to attempt a change in any of the telegrapher's letter forms—that would be an impossibility—however, he has a somewhat common fault with capital *a*, which will undoubtedly always stand—that of making the letter too full at the bottom.

When making capitals, the full arm movement can be brought into play to some extent, but, as stated in the remarks on position, the operator's full arm movement does not require that the top of the wrist should be kept level—enough arm movement to serve his purpose can be exercised without holding the forearm positively flat.

B

In the execution of small *b* or any other loop letter, the hand is required to move over just enough space to necessitate exercising a little movement in the lower arm, but hardly a full arm swing need be used, such as is frequently brought into play in the execution of certain capitals. Since the elbow is kept in a position well in advance of the point of the pen, a side movement of the hand will carry the line in a direction at nearly right angles with the base line; therefore, the loops are easiest executed with just a little side-rocking movement of the hand. At the bottom of *b*, however, beginning from about where the loop crosses itself when the line is brought downward, the circular twist which finishes the letter should be executed entirely with the fingers. Notice that from where the line turns at the top of the loop, the pen immediately begins "tacking" in a forward direction, and that the bottom turn, instead of being

pointed, is full and round. The little horizontal line at the finish is made, not with an abrupt stop and a retrace, but with a small reversed loop, which way of execution eliminates anything like a check in the movement. The general build of the letter is vertical.



Before much can be said concerning capitals like *B*, it is necessary to give some attention to the capital stem—the curve which, owing to its importance, might properly be termed the “backbone” of all styles of written capitals; although writers of more cultured taste usually prefer to mention it as “the line of beauty.” In written capitals the importance of this line compares very closely with what the principal straight line means to the alphabet of printed capitals; consequently, the penman’s success with the greater part of the capital letters can depend very much upon just how well he learns to handle this master stroke. In the slanting style the capital stem is probably the hardest to master, but in the railroad style the line is so simplified that there are really no reasons why the principle should seem so very difficult; and for one who takes enough interest in

writing to practice the line occasionally, there is positively no chance for failure.

By referring to the example shown, it can be observed that the build of the main downward stroke is vertical, and that where the lower end is not carried round into a flourish, both ends are curved to the same extent. While the capital stem may not appear to be shaped exactly the same at all times, the apparent change in form is due considerably to the shape of whatever letter chances to be built up around it. As a rule, there should be little variation in its form, regardless of whatever letter it forms a part.

The second style shown illustrates how the stem should be formed when just a little flourish is added to the basic principle; and as this is practically the only necessary flourish in the entire alphabet, those who desire to write a reasonably fair railroad hand will do well to master it—the penmanship results will prove well worth the task. The average telegrapher makes no attempt at keeping his flourishes horizontal as is required in the ornamental style—the speed of his writing does not allow the side rocking of the hand to be interrupted enough for that—but pains should be taken to have the flourish outline nearly a perfect oval, which means that both sides should be evenly curved.

A nicely written capital adds wonderfully to the appearance of the writing that immediately follows—this may be either the remainder of the word in which it occurs or an entire line of writing. This feature, however, may not always be entirely due to the slightly illusional effect, for where the penman

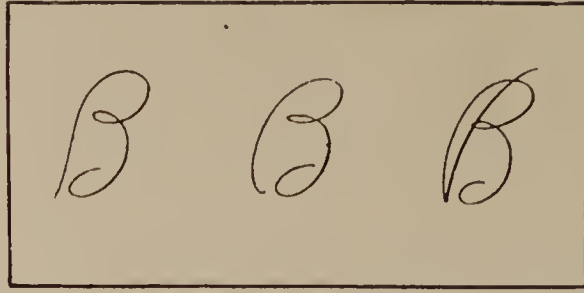
begins a sentence with a capital that is creditably well formed, his success that far frequently has a tendency towards spurring him into an attempt at doing as well with the entire line or even more.

When making the common capital *B*, the operator strays no great way from the ordinary style, except from the vertical build given to the character and the tendency that is always shown to place the capital stem somewhat nearer the center of the construction than is customary with other styles; this, however, has the effect of improving the legibility rather than destroying it. Too frequently the capital *B* like the first example is ruined by a poor capital stem; the fault in this respect usually being due to beginning this master stroke from the wrong direction—so that it points a little backward instead of forward at the top, and at which times it is not a capital stem at all. Refer to the illustration and observe the great difference that is made in the appearance of the character through merely handling the capital stem in the right and the wrong way. The little flourish at the finish of the completed letter is not different from the one frequently used with the capital stem, excepting that it is attached to a different curve.

The third example, which is the favorite with many, does not contain a capital stem. The downward stroke is simply brought to a stop at the bottom, and the letter then finished practically the same as the other style. The student will do best who uses either one form or the other—the capital *B* that is only a “go-between” the two is not a good one.

In the smaller plate, the first capital *B* shown is

simple enough, but the style is one that is not so easy to have well made as it appears. The common error

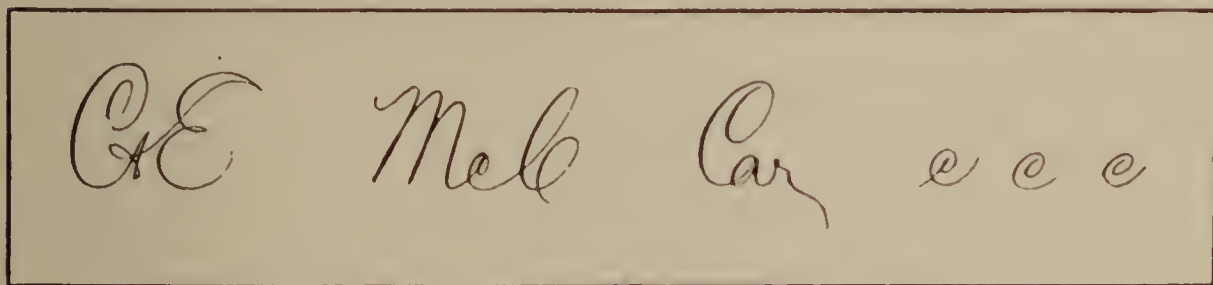


in the handling of this form is in having the back, or upward stroke, curved outward instead of straight, and this gives the completed letter a clumsy—or, as we may say, an untutored appearance. The more rapid the writing, the more difficulty does the penman experience in keeping the upward stroke straight enough to have the letter look its best, but the trouble is easily circumvented by starting with a downward stroke—see third example—and the letter is again transformed into a style that is the same as the third example in the larger plate, and the bad effects of the outward bend of the back are removed. Note that the second and third examples are the same in form except from the downward stroke in the latter.

C

The operator's *c* is probably best described when termed as the “old fashioned style,” but as the construction conforms in every way with the “Railroad Fist” principles of writing and stands far in the lead when considered from a viewpoint of legibleness, there are very good reasons why the “ops” have adopted this particular form of the letter. The ordinary way of making *c* is to begin with a left curve, like common

a, and, after the pen is brought to a positive stop at the top, to retrace the line for a part of its length before the last right curve is executed. The operator's *c* begins at the bottom with a right instead of a left curve, which is carried into a little loop in the center, after which the line is carried into the outline part of the letter without checking the swing of the pen. The beginning right curve is not superfluous, for, like in *a*, it is merely the course that is followed by the pen when it approaches the construction. When the arm movement is brought into play in the execution of any of the small letters or in traveling the hand along the writing line, it is mostly in the execution of this beginning right curve that such movement is exercised, while the remainder of the letter, usually its greatest part, is finished with the circling movement of the hand and fingers.



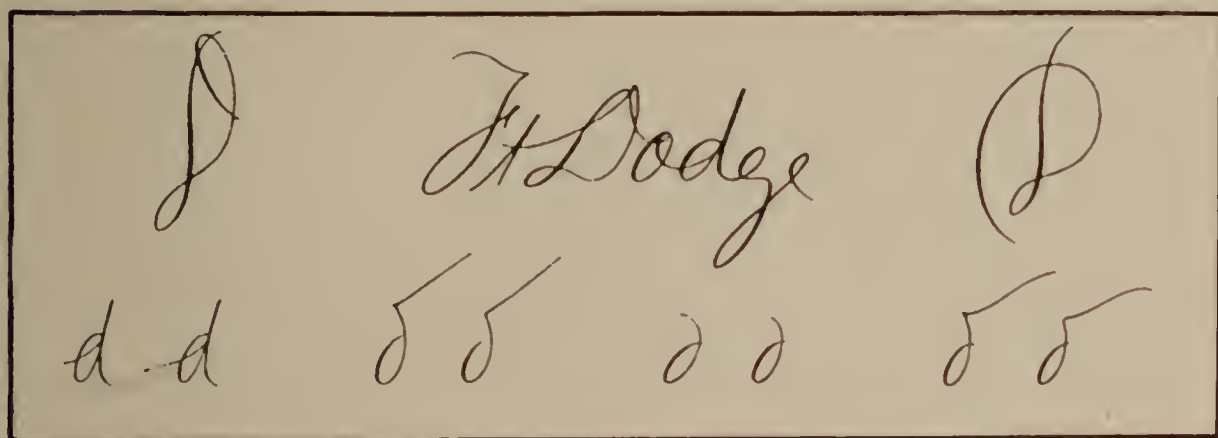
Both styles of capital *C* are used in the telegraphic hand, the old style round-hand *C*, which begins like small *l*, and the plain, or business hand capital *C*, the latter having the preference. With the round-hand style there is little deviation from the regular form except from its vertical build; but when the business hand style is used, it is not the practice to carry the lower turn at the finish so far around as is customary among penmen of the writing-book class. In-

stead, this curve is usually terminated at about the time it reaches the base line, and the effort that is ordinarily employed in carrying the line farther, is utilized in forming a part of the letter following. Note the handling of capital *C* in "car." In this instance the action employed can well be termed a "throw," and this in another way accounts for the operator's finishing this style at the base line—a little experimenting will readily prove that when the action of a throw is exercised, the effort becomes spent when the line reaches the lowest point in the turn; and when an attempt is made to carry the line upward again, its accomplishment is found to require an additional effort.

D

Lower case *d* except from its upward extension, is fashioned after a plan that is identical with that of small *a*; therefore, all the short-cuts of advantage that have been discussed in the exposition of the latter mentioned character are likewise applicable to small *d*. This letter, however, is not without a few individual characteristics, the most important of which are as follows: The upward extension, or standard, which is nearly vertical, should be made quite tall and rarely if ever looped. While such features appear insignificant, one cannot afford to look upon them with too little concern, for the legibility of the written word necessarily depends on the correctness of the letters of which it is composed. For instance, when considering *d*, it is observed that its legibility depends greatly on the handling of the upward extension—it should be made tall enough to

stand out distinguishably from all letters of one space; and, when not looped, it cannot be confused with *el*, *cl*, nor any other combination of the properly looped letters. When correctly handled it will speak “*d*” and nothing else. Those not adverse to the practice of pen lifting, frequently treat *d* very much as they do small *o*; that is, the pen is lifted at the top of the standard, circled around to the left and not replaced until beginning the next letter or word that follows.



Capital *D*, like *B*, begins with the pure and simple capital stem. When the loop at the lower end of the stem is formed, the line, for exactness, should be carried forward across the stem so as to form the cross at the highest point in the horizontal curve—the best appearance of capital *D* depends more than the average penman supposes upon this seemingly trivial feature. It is better not to use that freakish style of capital *D* which extends below the base line and which, when finished, looks very much like the figure 8. It is to be admitted that there is possibly a slight advantage in so distorting the construction of this capital since joining the letter to the rest of the word of which it forms a part is, perhaps, accomplished somewhat

easier by having its top down on a level with the lower case letter that follows; but, when this style is used, the appearance of the writing is so grossly impaired as to result in a loss that is greater than the gain. When capital *D* is not joined to any character following, the outline is usually made larger than when otherwise handled, and the pen in its course ahead is lifted and carried forward just under the completed letter.

E

Little need be said respecting small *e*; although, when not correctly handled, this letter as well as any other can do much towards destroying the characteristic appearance of the telegraphic script. The plain and simple little *e* is the one best conforming with the principles of the style—the use of the capital form for a lower case *e* is not a general practice except in such places as occur when the line, so to speak, is brought down from “overhead,” as is frequently the case when small *e* follows a capital. The two little curlicues used in constructing an *e* of the capital style, are in all respects the same as two *e*’s of the simpler form, excepting that the loops extend horizontally instead of vertically; therefore, it is obvious that time and energy can be wasted in forming two such loops where one should suffice.



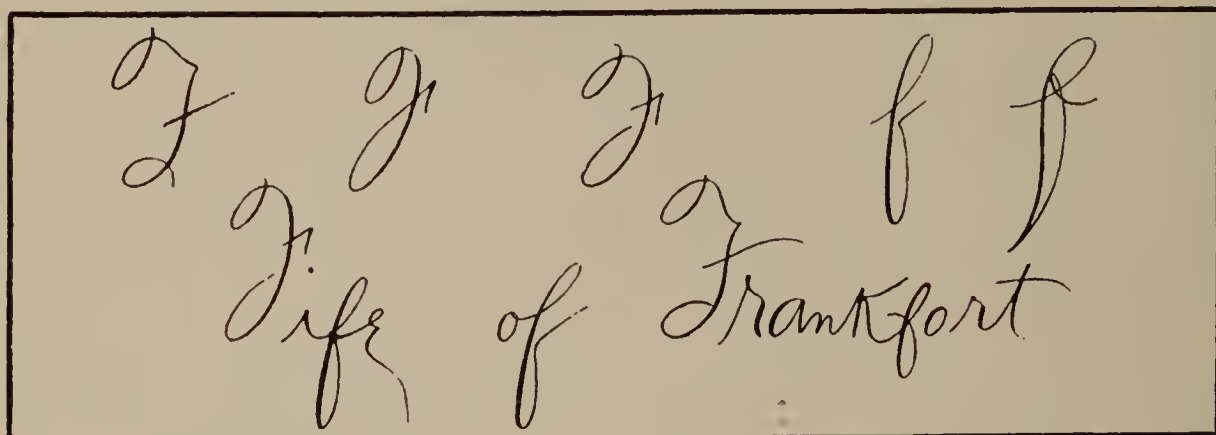
Capital *E*, as a rule, is not joined to the word in which it occurs, although the practice of so handling is not at all out of order where the penman considers this to be the easiest way; it is merely a matter of lifting the pen or allowing it to trail. Where the line is disconnected, the letter following is usually set a little closer to the *E* than is the practice at other times—crowded writing is kept more legible by a frequently broken line.

Because the entire letter is made with the operator's favorite movement towards the left, a noticeable loop is usually formed in the center—this loop should not be too large. For best effect in legibleness, the upper and lower parts should be of about equal size; and, except from being reversed, they should bear close resemblance in form.

F

All the principles that are applied in the execution of the lower case *b* are found to be practically the same in small *f*, except that the lower part of *f* is more elongated. The first example shown is the form most commonly used; the second appeals more to those of the "elite class." The latter style is by no means an easy one—it rarely if ever looks right where the penman "draws" the form. The design seemingly is better suited for those who naturally write rapidly and well and with a quick and snappy action of the fingers. Although the back of the plainer style is considerably curved outward, the general build is usually vertical excepting when the starting point is more or less above the base line, and at which times it is allowable to lean the top loop forward to

a certain extent. This way of forming the letter does not necessitate changing the movement so abruptly from a forward to a vertical direction. It should be mentioned here that it is not allowable to bend the loops of *b*, *l*, and *k* forward so much as is frequently the practice in the handling of *f* and *h*. Such treatment of the first mentioned letters gives them too much of a tangled appearance, and this destroys their legibleness more than is the case with the other loop characters.



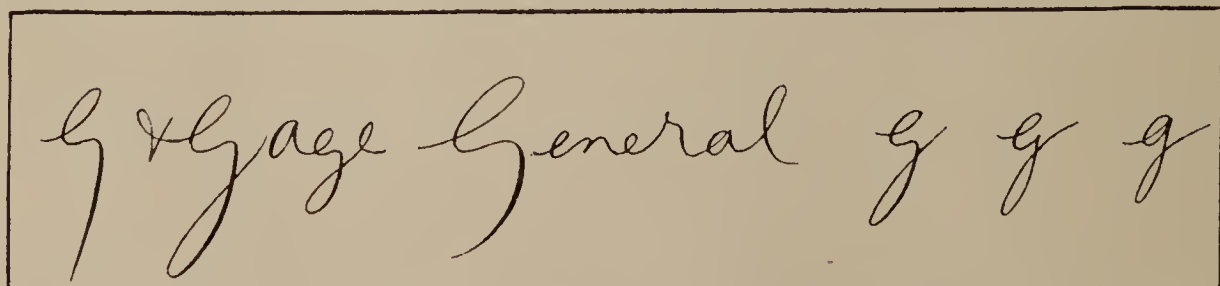
Capital *F* for many persons seems to be something of a "Jonah," but when once mastered, the penman has also accomplished as much with capital *T*. Not only is the form somewhat difficult, but considering that the letter must be started with a movement which circles towards the right instead of the left, the action becomes a little awkward for those who are confirmed in the telegrapher's way of writing. Immediately after forming the loop at the top, the line forward should incline downward to a considerable extent until brought to a positive stop at the top of the capital stem. The capital stem part of the construction is given little or no forward bend at the top,

but is finished with the regulation flourish at the bottom. While capital *F* can as well be built on tall and narrow lines, the broader design seems to be somewhat the favorite. The letter is not so legible when crossed with either the finishing end of the flourish or with a line that is carried into the writing that follows—it should be crossed with a disconnected line in a manner that is identical with the crossing of small *t*.

There is one particular form of this capital—see second example—which is now generally taught in business schools, and which, in being simple and legible, has features that it seems should appeal more than they do to the telegraphers' notions in regard to writing; but there apparently is an avoidance of the style which perhaps is due to no more than the fact that its execution requires a circular action that is towards the right instead of the left. Those who practice writing exercises to such an extent that circling the pen in either direction is comparatively easy, have learned that the form referred to is indeed very practical; and, taking into consideration that the style of capital *F* that is so generally used among the operators can hardly be considered an easier one, it is the opinion of the author that if the more up-to-date style were given just a little try-out, its use would soon be adopted by many of those who are always on the lookout for what is best. This form of the letter is not introduced here as correctly belonging to the Railroad Fist style; it is merely offered as a suggestion to those who experience the common difficulty with capital *F*.

G

Small *g*, like *a*, should be started with a right curve, but after making the beginning loop, it is hardly necessary to carry the line to the top of the letters a second time before changing the course of the pen at the point where the lower loop begins. Get started on the downward extension quickly as possible after forming the first little loop—like *e*, except more slanted—but try not to be in a hurry so great as to neglect making at least a little shoulder in the line before carrying it downward. Too much “cutting the corner” at this joining causes the completed letter to look very much like the figure 8 and impairs the appearance of the writing. The telegrapher’s best lower case *g* is little less than a miniature capital—note that in the word “Gage” there is little difference between the two *g*’s except in size. In the exposition of small *a*, attention has been called to the advantage in keeping the body well laid down. The same principles apply to the top part of small *g*; and when the oval is made more horizontal than perpendicular, it is observable that there is little occasion for carrying the line more than just a little above the base line previous to executing the lower loop.



In what is probably an attempt at giving the writing a “Railroad Fist” appearance, telegraphers of

the student class who are entirely unacquainted with the principles of the method, frequently resort to the erroneous practice of twisting some of the letter forms out of shape more than necessity demands, which results in a waste of time and effort without a gain of the slightest advantage. In connection with such errors, which in every instance are not always confined to the "greenhorns," the writer has in mind more particularly the distortions that are frequently imposed upon the lower loop letters, *g* and *y*, which characters, when subjected to such treatment, are made with long and bended loops which extend altogether too far backward. However, as an aid in gaining the utmost facility in writing, there is some occasion for just a slight bending of these loops, but the extent of this should be governed entirely by the location of the letter in the word, and by the location of the beginning point of the letter following. The principle applying here is that the loop should be so formed that its finishing stroke can be the sweep into whatever character chances to follow—the finish of one and the beginning of the next should be described by a nearly straight line. When these loop letters occur in any part of a word except the end, it is hardly necessary to bend them backward any more than is the practice in ordinary writing; but when they occur at the end of a word, as *g* and *y* so frequently do, the loops are necessarily bent backward somewhat farther so that the finishing stroke can incline towards a point that is farther in advance; the degree, of course, depending on the amount of space between the words.

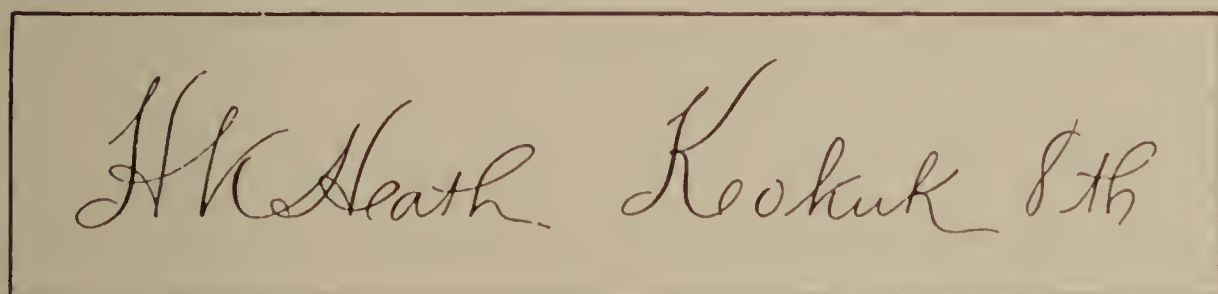
The principles of capital *G* are much the same as for the smaller letter, although, as a rule, the beginning loop of the capital is not given so much of a forward slant. Owing to the position in which the average telegrapher holds his pen, and because he depends so much for motion upon a side-rocking movement of the hand, it is easier for him to make upward and downward strokes than to execute lines running parallel to the base line—the latter require more of that awkward extending and retracting movement of the fingers—consequently, his capitals are not usually very wide. Capital *G* is a fair example showing the operator's preference for capitals of a narrow build.

H

While it is obvious that a loop cannot be formed without carrying the pen in a backward direction in some quarter of its construction, there is an easier way of executing letters like *h* than by carrying the line backward as far as desired at the end of the loop and finishing the character with a straight back. In a paragraph above, it has been shown that the execution of the lower loops is rendered easiest when so constructed that the upward stroke can be utilized as a perfect lead into the letter following. The easiest handling of the upward loops is somewhat reversed. Here, the line running into the loop, instead of the one coming out, is inclined to the most convenient angle—the degree in this instance depending upon the angle from which the line approaches the loop instead of the one to which it is carried. It is allowable to lean the *h* forward more than *b*; but, after reaching

the end of the loop, the line is not swung down and forward so much as in the latter letter, because bringing the pen to a positive stop at the bottom interferes with the forward swing. A tendency is sometimes shown to lean the *h*'s forward considerably more than license would demand; but when handled correctly, neither *f* nor *h* will be "humped" to any greater extent than the amount that is sanctioned by the line leading into the loops.

In brief, the lean of *f* and *h* should be governed by a principle—not by a fancy.



When one has mastered the capital stem, there is little chance to experience trouble with either capital *H* or *K*. Both are begun in practically the same way, except that the line leading to the top of the capital stem is not usually made quite so long in the *K* as it is in the *H*. This feature has nothing to do with the execution of either letter, and whether it is given strict observance is of no particular consequence; but where the penman condescends to humor the handling in this respect, the best appearance of the two letters is brought out to a somewhat better advantage.

A very easy and legible style of capital *K*, which has proved itself fully as much a favorite as any other, is shown as the initial after *H*. For all round practicability it is a hard one to beat.

I

Owing to the simplicity of the lower case *i*, very little special instruction concerning it need be written; however, the little there is to a call attention to should be considered equally important with whatever has been said concerning some of the more complicated constructions. Just a little up-and-down movement of the fingers is all that is necessary to produce the *i*,—not even the slightest rocking of the hand is required. There should be no backward slant in the downward stroke—immediately after leaving the top, the line in its downward course should be started in a forward direction so as to sweep into whatever letter chances to follow.

An examination of the different specimens of handwriting in this book will disclose a few instances where the *i*'s have been dotted with little circles instead of dots. This has been done to illustrate a characteristic—not to indicate an essential; however, considering that the practice of so dotting the *i*'s is somewhat more prevalent among the telegraphers than elsewhere, especially in the young set, the subject is deserving of consideration here, and those who look to minutest details are entitled to find the subject discussed to some extent in this lesson.

The writer considers the use of the circle dot as somewhat faddish—too much so to be employed in strictly business writing. Dispatchers, train-masters, superintendents and higher officials, who have reached their various stations through promotion from the operators' ranks, are rarely if ever observed clinging to the circle-dot habit; although, at sometime dur-

ing their telegraphic career, the most of them undoubtedly passed through that stage where the "op" cannot imagine his penmanship as looking like the "real stuff" when it is not adorned here and there with more or less such decoration.

Among those who take the greatest interest in the peculiar chirography of the telegraphers, there occasionally arises a discussion as to why so many of those who have won a reputation for themselves through their ability as penmen should resort to the practice of using these little circles to so great an extent where it seems that simple dots should suffice, or even be entirely better; and, while the requirements for speed are not so great in any other profession where the work is performed with a pen, yet the practice is never so much in evidence in any other style of writing. One who has never given the matter thought would undoubtedly be considerably surprised to learn of just how many different theories on the subject have been advanced at one time and another; but the exact reasons for the operator's toleration in this respect is rarely if ever satisfactorily explained.

Writers versed in graphology, or the study of character reading from handwriting, say that the circle dot is found mostly in the handwritings of those having considerable love for beauty. This is possibly true as far as it goes; but, even though the telegraphers' class undoubtedly includes as many "beauty lovers" as can be found in any other profession—and that eye for beauty possibly not always confined strictly to penmanship—the writer, while agreeing to some ex-

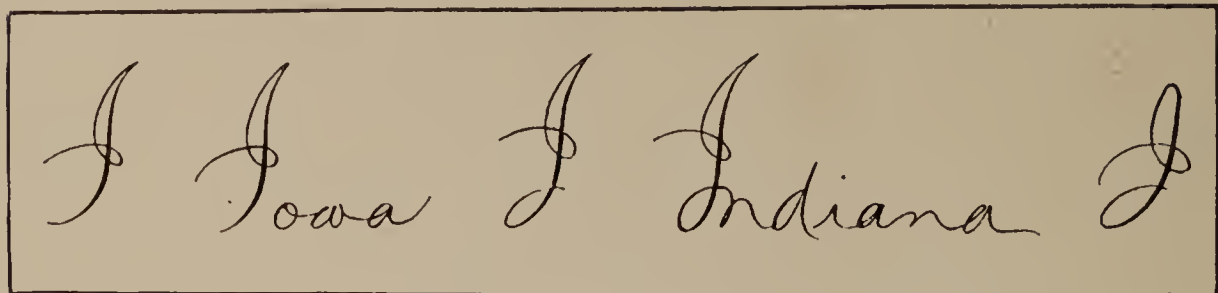
tent with the graphologists, is also inclined to assign a few reasons other than "love of beauty" for this peculiar trait of the railroad penman.

As previously stated, it is the novice who, owing to an observance of that adage with regard to doing as the Romans do, is most likely to over-reach himself in the matter of touching up his writing with the circle dot; however, owing to perfectly natural reasons, there are two other explanations as to why the circle-dot habit should be more prevalent among the operators than elsewhere: First, as stated under another heading, it is not in accordance with the principles of the Railroad Fist to allow the pen to come to a positive stop whenever it can be avoided. The quickness with which the telegrapher penman forms his letters and words, allows him to copy "ordinary sending" with time to spare; but, whenever it becomes necessary for him to do any waiting, he is usually observed to occupy the time by keeping his pen in motion with a little circular movement of the hand. He does this for the reason that, when starting anew after each little check in the actual writing, he finds it an easier way to generate the exactly right action for continuing than would be the case were he to attempt the same performance from a standing start. Now, in the matter of dotting his *i*'s the operator feels no more inclination to check the circular movement of his hand for this purpose than he does for any other; consequently, he is very likely to turn the trick every now and then by using the little circles, since their execution does not necessitate bringing the pen to a positive stop.

Where the writing is crowded to any extent, there is, if the circle dot is used promiscuously, a likelihood of errors occurring because of the circles becoming entangled with neighboring letters or figures—this means, of course, when the circles are made larger than necessary and not correctly placed. There is record of many instances where railway companies, for the sake of safety, have issued instructions to their employees prohibiting the use of the circle dot in train orders; and yet, this is no less than the second place where there seems a somewhat reasonable excuse for resorting to the practice. Here, it is usually necessary for the operator to produce several copies in manifold by placing carbon sheets between a required number of the train-order leaves; but, if the copies are numerous and the carbons not fresh, the impression of the stylus will not penetrate satisfactorily to the lowest copies unless the point of the stylus is “dragged” just a little upon the surface of the top copy. When the *i* is dotted by merely touching the writing surface with the stylus, the top copy is usually about the only one to show that a dot has actually been made; but where the circle dot is used, owing to a little drag of the stylus being exercised in its making, the dotted *i*’s are found to print plainly through all the copies exactly the same as does any other part of the writing. For the same reason little crosses are sometimes used for periods.

A nice execution of any capital letter requires very much the same mind effort that one exercises when pronouncing correctly a long or difficult word—the word, in being spoken, must be handled in the mind

in parts and pronounced by syllables; likewise, any character in writing to be well executed must be



learned, not as a whole, but by the parts or principles that combine in building up its complete construction. There are really no reasons why capital *I* should be a very difficult letter; yet, aside from the experts, penmen are few who make their capital *I*'s as nearly correct as they write almost any other capital.

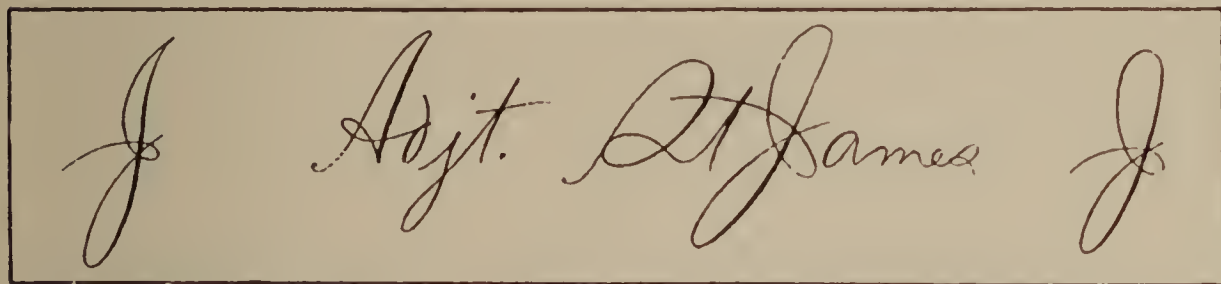
The telegrapher's capital *I* differs somewhat from the copy-book style, but is really no more difficult when taken in the right way; that is, its construction considered by the elementary principles.

The capital proper starts from a little below the center; however, the pen is not usually placed in the middle and moved from a standing start, but is carried in and out with a swing which, owing to the trailing of the pen upon the writing surface, naturally forms a beginning loop. After the point at the top is reached, the letter is finished with the simple capital stem.

J

Two reasons can be given why not much need necessarily be said of small *j*: first, because of its simplicity; second, because of the infrequency with which the character occurs in ordinary usage. If

just a little effort is made to apply the principles that should be known to the reader who has followed the lessons thus far, little difficulty will be experienced with this simple construction. The loop should be handled in accordance with the instructions pertaining to small *g*—the backward slant depending upon how far the pen must be carried ahead in order to reach the beginning point of the next letter or word.



Capital *J* is no more nor less than an elongated *I* having its center located on or just a little above the base line. Also like capital *I*, the style with the pointed top stands more in favor than the oval form; probably because of being a narrower construction.

In either case capital *J* usually begins with the reversed loop at the center.

K (See plate H)

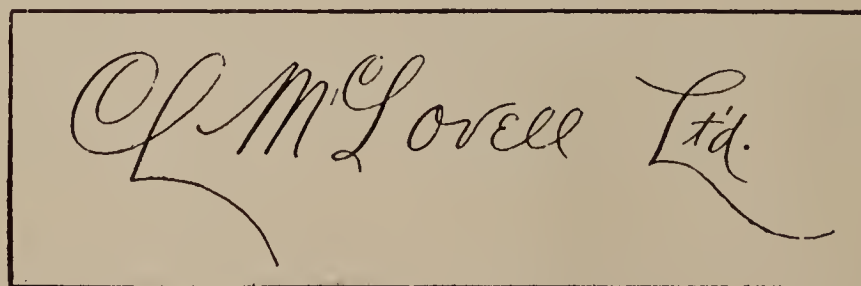
Even among the best railroad penmen, there is considerable variance in the manner of handling small *k*; therefore, the selection of a form that can be offered as somewhat close to a standard is a matter not so easily decided as has been the case with many of the other characters. The most popular style is probably the one so nearly like the capital form—see first example, made similar to first capital—but on account of its loose construction the style requires that

the handling be somewhat careful; otherwise, it is not so legible as the more common design. When *k* is begun with a loop, no matter which style is employed, it is not allowable to bend the loop forward in the manner found so convenient in the handling of *f* and *h*. When *k* is subjected to this treatment, it is found that, owing to too much crisscross construction, the legibility of the letter is very much impaired.

The handling of capital *K* has been discussed with capital *H*.

L

In reality, small *l* is no more than an elongated *e*. The build of the letter should be very nearly vertical, and both front and back of the loop should curve to about the same extent—this scheme leaves it possible to get into the loop and out again while opposing the minimum of inertial resistance. As with *k*, the loop of *l* cannot be given much forward bend. When so treated the letter looks overbalanced; but “bend,” remember, is different from slant.



The most common style of capital *L* shows, as has been mentioned in the exposition of capital *G*, that the operator has no scruples against running his lines up and down to any reasonable length, but he seems

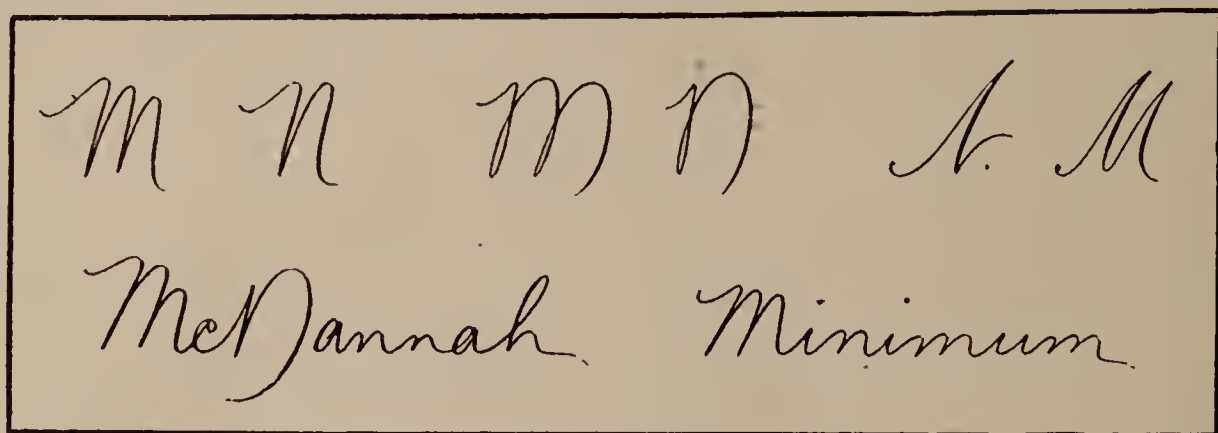
quite adverse to the practice of taking up any more than necessary space with lines running from left to right. Like capital *G*, the *L* is made quite narrow, but is usually slanted a little more than the first mentioned letter. Except from being reversed in position, the upper and lower loops are usually very much the same. Frequently a tendency is shown to handle the lower flourish of capital *L* very much the same as the corresponding part of capital *S*; but, where this is the practice, care should be taken to have the upper loop of the *L* begin with a horizontal instead of an upward sweep.

The first example is preferred by many who sling a rapid quill; yet, while it is perfectly legible and has an “easy” appearance, to turn the lower corner in the manner shown is little, if any, easier than to form the loop in the regular way.

M and N

In the expositions of *a*, *c*, *d*, and *g*, it has been explained that the upward left curves are not so easily executed as are those which bend towards the right, and for which reason the operator penman eliminates them whenever he finds it possible; but this practice should never be applied in the handling of *m* and *n*—making either of these letters with waves reversed, like in *u*, tends to destroy the legibility of writing more than any other bad feature that is as common, and the penman who is careful will be very particular in this respect. It is not because these characters are difficult to describe that they are so frequently slighted in the manner shown—it is in that the required cir-

cular movement to the right is more difficult than to the left, especially for those who write mostly with the finger movement. The *m*'s and *n*'s, in order to fill all requirements, must show an "over" movement in their construction; and, when the circular movement to the right interferes with an easy manipulation of the pen, the proper effect can be obtained by employing a waving movement of the fingers which can be worked in unison with the hand as it carries the pen along its course from left to right. While the operator's *m*'s and *n*'s do not slant, yet, as a rule, the downward strokes do not carry the pen quite so great a distance forward as do the lines running upward, although the last downward stroke in either letter should be a quick and graceful "get away."



In the selection of either capital *M* or *N*, there is a somewhat larger variety from which to make a choice than is the case with almost any of the other capitals.

Not many rapid penmen, however, are inclined to confine themselves to the use of any particular one of the different styles illustrated; and as none of the forms possess any particular advantage over the

others, there is a noticeable tendency to humor the fancy when we come to the *M*'s and *N*'s—to find two different styles used on the same sentence, or even in the same word, is not at all uncommon.

From a standpoint of being typical, the second style shown is probably nearest to the operator's ideal—its use among this class of penmen is very general, although it is a style that is very seldom seen in any other style of writing; that is, as it is handled by the telegraphers. The first style is no less a favorite, especially among those who prefer a style that can be joined with and ran smoothly into the rest of the word without disconnecting the line. The *M* and *N* of this type are in reality nothing more than enlargements of the lower case *m* and *n*; although when used they are usually favored with a little more slant than is customarily given to the lower case letters.

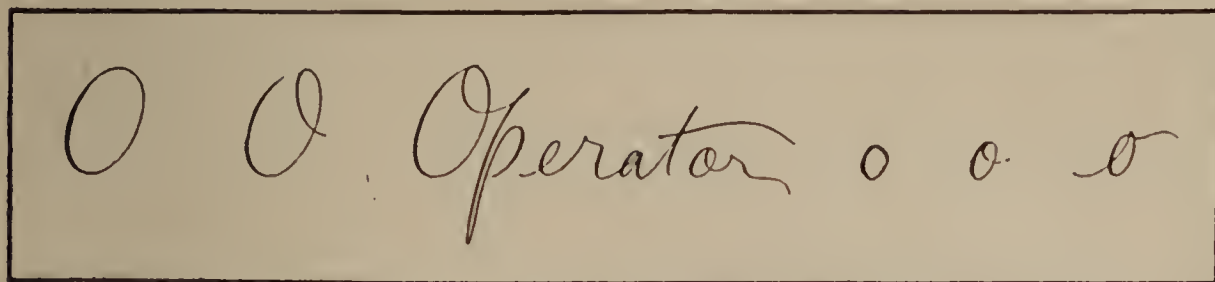
The third pair are also considerably used, but not to the extent that are either of the others—the *N*, as a rule, stands more in favor than the *M*. Where this style is used, the *M* requires more careful handling than does the *N*—careless handling of the *M* is likely to give it the appearance of capital *U*. To guard against this, the capital stem, which in this instance begins at the bottom, should be given considerable of the compound-curve effect by starting well out from the bottom of the letter and turning a little forward at the top. The *N* also looks better when handled carefully in this respect, although a little deviation from exactness does not so seriously affect it legibility.

O

The author has at hand for critical study many best specimens of the "Railroad Fist" from all parts of the country, but this budget does not reveal that there are more than a very few of the veterans who use the style of lower case *o* that is usually taught in the schools. Under "Principles" attention is called to the fact that whenever the construction of any character requires that the pen should be brought to a single point a second time, it is usually found easier when making the second trip to lift the pen and circle around to the desired point, rather than reverse the motion and retrace. This feature becomes particularly evident in the handling of small *o*—very few of the handiest class go into the letter from one direction and "right-about" before coming out in another. Some more than others cut the *o*'s entirely separate from the rest of the writing, but when this is the case, the object in lifting the pen is either to avoid an interruption of the rotary movement of the hand, or to eliminate some angular joining which is found too difficult for the rapid penman to attempt. It is obvious that when *o* is made separate, no more effort is required to form the letter than to dot an *i* with the little circle (See lower case *i*), and usually very much is added to the legibility of the writing when the letter *o* is handled in this way.

Except when followed by one of the lower loop letters, capital *O*, like the lower case letter, is not usually connected to the rest of the word in which it occurs. The best operator's capital *O* is nearly a perfect oval, proportioned about the same as a printed *O*—slightly

broader if anything—and slanted just a trifle. Many penmen who write with remarkable speed execute



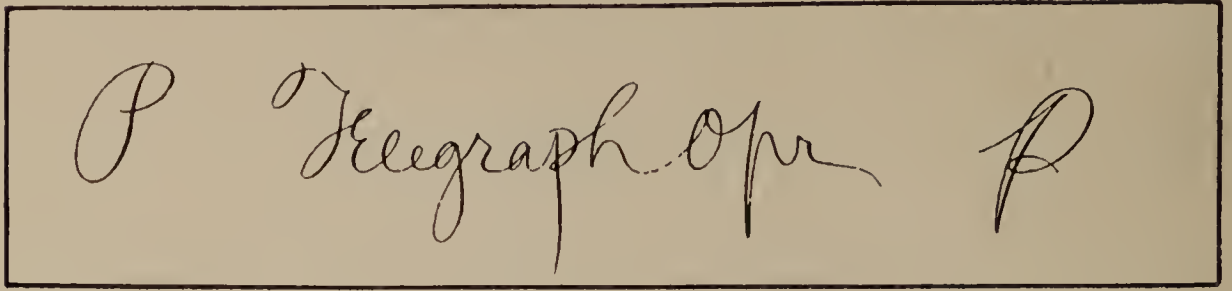
their capital *O*'s with great dexterity, cutting them out with little swings of the hand practically as one ordinarily makes a cipher; and the joinings, which are at the upper left quarter, are made so neat that the finished *O* looks to be an endless line.

Capital *Q* is treated identically as is capital *O*. The cyma, or curlicue, which completes the letter, should be made separate and given a compound curve. The old-fashioned capital *Q*, made like figure 2, is very seldom used by the operators—not only on account of not being so legible as the printed style, but mostly because its making requires a circling movement that is towards the right.

P

Two common styles of small *p* are shown: The second which may be termed the “ordinary,” is probably the most used. The first, owing to its close resemblance to the printed letter, is a favorite with many, although the most careful penmen use it sparingly except where followed by the loop letters *h* or *l*. A third form—see in “Operator,” exposition of *O*—is practically the same as the second example considered here, except from the downward turn at the

finish. It is used to a great extent where the writing is compact or crowded.



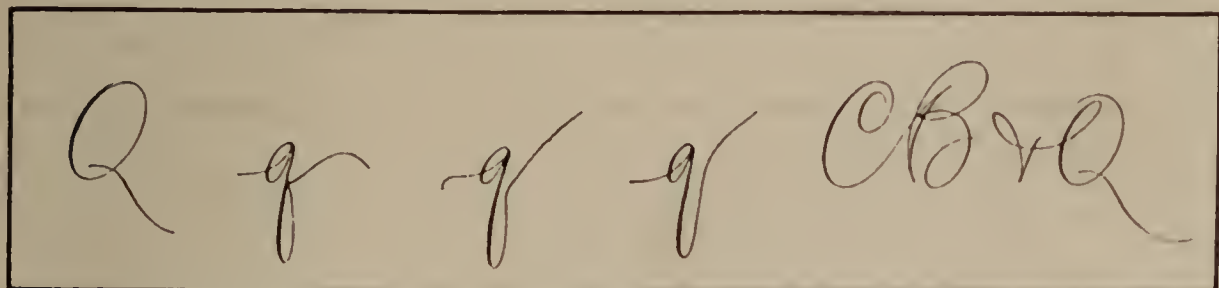
The first style is the only one showing any backward turn in the line, this being in the loop just before the finish. While very legible, this style is not so practical as either of the others when the letter following it is of such form as to interfere with carrying the line up and forward from the lower turn in the loop. If handled right, the style is nicely used before *a*, *o*, or any upper loop letter; but when *e*, *i*, *r*, or *u* come immediately after, either of the other styles is more adaptable to the rapid penman's use.

Frequently the main downward stroke of *p* turns slightly forward as the line is carried towards the lower end. This is due to a radial course of the pen when the point serving to rest the hand is considered as the central axis.

Q

All principles applicable to small *q* have been treated in preceding lessons. While parts of its construction are similar to corresponding parts of *a* and *f*, yet a comparison with *g* requires a little more careful separation. In the exposition of *g*, it is shown that, when carrying the line downward into the loop, it is allowable to "cut the corner" to some extent, but

q cannot be so slighted—the letter does not look right unless the lower loop is started the right distance from above the base line. Make *q* like *a* as far as the second turn above the base line, and finish the loop like the lower part of *f*.



R

Small *r* is usually made very much like small *i*, except that after leaving the apex a little wave is made in the downward line a trifle above the center. The more the writing is crowded, the more prominent must be the little shoulder that is formed by the wave, just as the angle of a drawing compass becomes more acute when its branches are folded closer together. If the writing is very compact, the *r* is closed up so that its top is nearly square-angled; but when the style of script is somewhat drawn out, the *r* settles down and the right side of the letter submits for most of the intension. This “stretching” of *r* should not be overdone, for, as before stated, when the shoulder is too much slighted the letter becomes too much like *i*. Many an “op” who is inclined to pride himself on his “mitt” is too much addicted to the habit of so slighting the *r*’s.

Nearly all of what has been said respecting capital *B* is also applicable to the capitals *P* and *R*. The

build of both is practically vertical, and, like in *B*, the capital stem of each is kept nearer the center



than is the practice in ordinary usage—a feature which adds considerably to the legibleness. Many prefer to lift the pen at the bottom of the capital stem and not replace it until starting downward a second time, but in either case the execution is practically the same. While there is nothing very difficult connected with any one of the three capitals, *B*, *P*, or *R*, yet penmen of the ordinary class are few who do justice to all three of them. Even when the capital stem is to all appearances perfectly formed, there is usually some “fall-down” in connecting it up with the other parts of the letter. As a rule, a little attention given to the principles of symmetricalness as concerns the matter of curves would be effective in removing many of the faults.

S

Due to the fact that the writer has always been an ardent admirer of the best in penmanship, he feels somewhat bound to confess that his enthusiasm has never been set very much astir over one particular letter of the telegrapher's alphabet, that being the small *s*.

However, with the presentation of this work there is included a promise that every trick of the trade

shall be revealed—that is, as far as the field of knowledge and resource will allow—and so, while it is not at all improbable that a few of these lessons may be lacking in some respects, it should not be assumed that anything has been withheld intentionally; therefore, due to reasons as stated, the telegraphic style of *s* is presented just as it is usually handled by practically all the successful class.

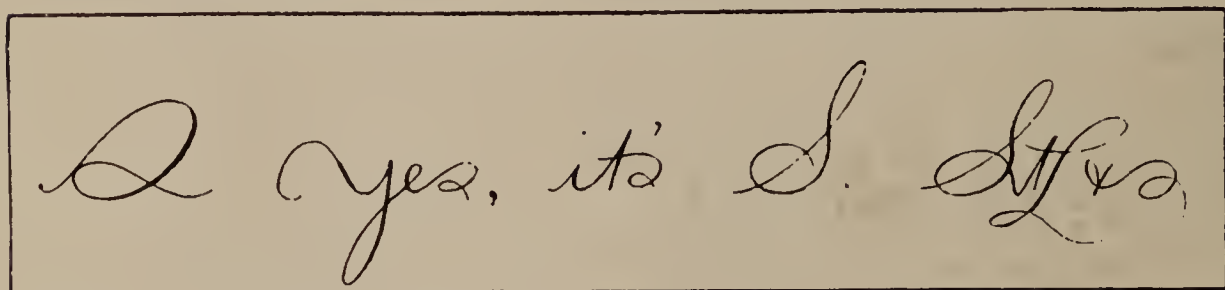
When the one who is careful with his writing begins his career as a telegrapher, he is sometimes inclined to hesitate before abandoning the style of *s* that has been handed down to him from forefathers; but speed and legibility, rather than all grace and beauty, are the foremost requisites in the telegrapher penman's cause; and so, because the advantages in using the *s* of the improved style are soon apparent, it is usually no great while before the one who aspires to class with the best acquiesces in the matter of its adoption.

The style is not altogether an innovation originating among the telegraphers—it is sometimes found in the chirography of other classes; also, practically the same construction is considerably used in ordinary writing as a finish to small *p*.

Writing experts agree in that *s* is one of the most difficult letters, and there is only to admit that when the letter is made like the style always shown in penmanship copy books, a great many twists and turns are required in order to obtain so little in the end. But any difficult features connected with this construction which may occasionally perplex the engrosser and the fine art penman are never allowed

to interfere with the telegrapher in his race with speed—when he comes to *s*, he simply ignores most principles of the ordinary style and tears his way through all the obstacles with a “somersault.” It is not because the operator’s *s* is impracticable in any way that we feel so much aversion to the style, but mostly on account of its ungraceful appearance; and since it is usually made rather large and full, the even spacing of the letters among which it occurs is nearly always destroyed. However, like many other things connected with the forward rush of progress, it is “built for speed” and is entitled to receive here the same consideration that is given to any other character belonging to the improved alphabet.

The accompanying plate, which illustrates the usual way of handling the *s*, shows that there is not even a “feint” towards pointing the construction at the top, and that the line at the bottom is carried in and out with a loop instead of a retrace.



While capital *S* has an easy and graceful appearance, it also is, as a rule, a somewhat difficult letter—at least, it must be if we are to judge by the number of faulty examples that usually appear in ordinary writing. One of the foremost reasons why those who make no study of penmanship are likely to meet

with failure when they come to this capital, is due to an oversight of the fact that the construction of the letter includes a regulation capital stem, just as does capital *T* or any other old-style capital letter. Among the experts it is understood that the stem in capital *S* curves a trifle more than in other capitals, but this is considerably a matter of judgment depending upon just what style is chosen—the more slanting the upward stroke, the less need the stem be curved.

Since the operator clings so determinedly to every principle of legibleness, he is rarely if ever observed to make a capital *S* that could in any way be mistaken for a capital *L*. The trick is accomplished by always starting the upward stroke from a low position and by keeping the flourish of the stem so large as to have none of the “loop” appearance which it retains in the other capital. Observe that in the initials *St. L. & S.*” the flourish is made so large as to necessitate bringing the pen back to the base line with a positive stop, or, at least, an abrupt turn before starting the *t*—a favorite way of handling this combination. If the flourish were smaller and the line carried into the *t* with a compound curve, a resemblance to capital *L* could hardly be avoided.

T

Not much space is required in which to tell all that seems most important concerning small *t*. Like small *d*, this character is usually made rather tall and never looped. When *t* occurs before *h*, it is quite the practice to lift the pen after the standard is made, and to form the cross with the beginning stroke of the *h*;

and, where this combination is used, the *h*, owing to the high angle from which it is approached, should be

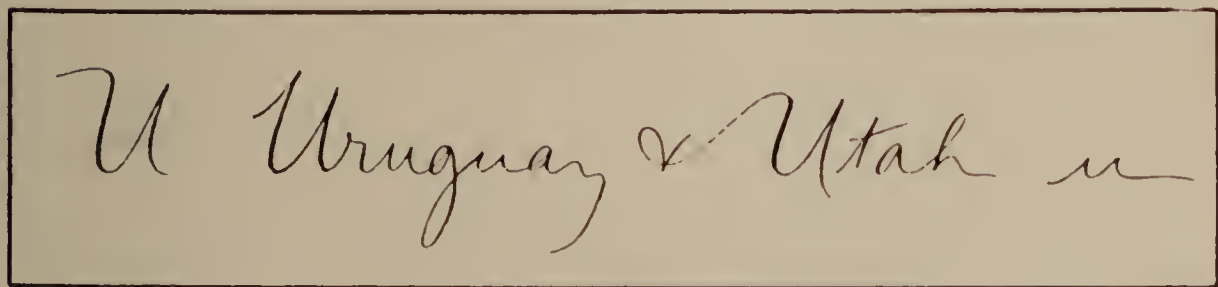


made with the loop bending considerably forward. The uncrossed *t*, which in ordinary writing is so generally used at the end of words, has never stood much in favor among the telegraphers; probably because of its being less legible than the *t* that is crossed in the regular way. The consideration in this respect that is usually conferred to *t* would suggest the following comment: Those who intelligently handle the telegraphic style of chirography have usually acquired much of the accomplishment through constantly endeavoring to keep the script "as plain as print," and by giving attention to many little details in connection with writing a perfectly legible hand other than merely attempting to have all letters uniform and well spaced. From a legibility point of view, the culling out of all unsuitable forms is one of the practices that have been considerably instrumental in advancing the Railroad Fist to its place so far in the lead. Therefore, in line with these remarks, while it is never advisable to actually print a character, especially a capital, yet, in the matter of choosing between two or more different styles of the same letter in order to obtain the greatest degree of legible-

ness, it is usually a safe plan to adopt the style nearest resembling the printed form.

U and V

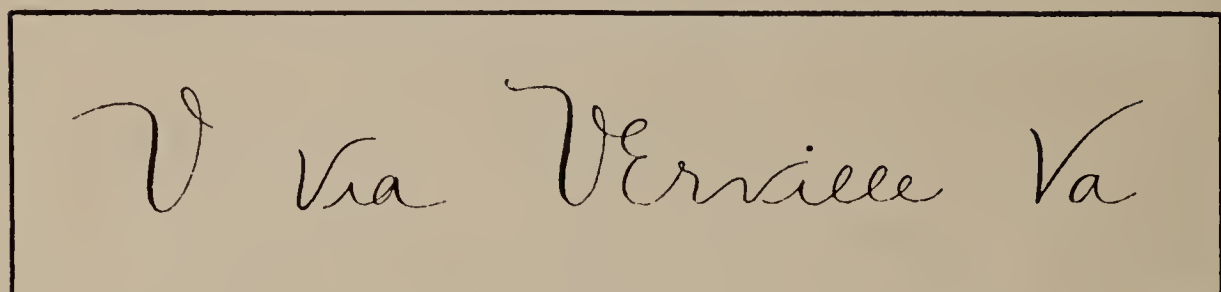
When making small *u*, the pen should be kept wiggling its way forward with every movement, both up and down. Because the last downward stroke is no more than a forward sweep into whatever letter chances to follow, the usual tendency is to give this line more of a forward slant than is given to the first; and while there is no particular harm in this, it is best however to have both downward lines slant to the same extent, the degree depending on whether the writing is openly spaced or crowded.



Where the lower case form of *u* is used for the capital, the initial stroke should not start from the base line, but from a point about half way up. This is to avoid too close a resemblance to capital *M* of a similar design.

Nothing very beautiful can be claimed for the operator's small *v*, but in being perfectly legible and easily made it answers the purpose well. The letter can be started with either a right or a left curve—where the right curve is used, the first part of the letter is pointed at the top like small *i*. There are, of course, a liberal share of the “ops” who make their

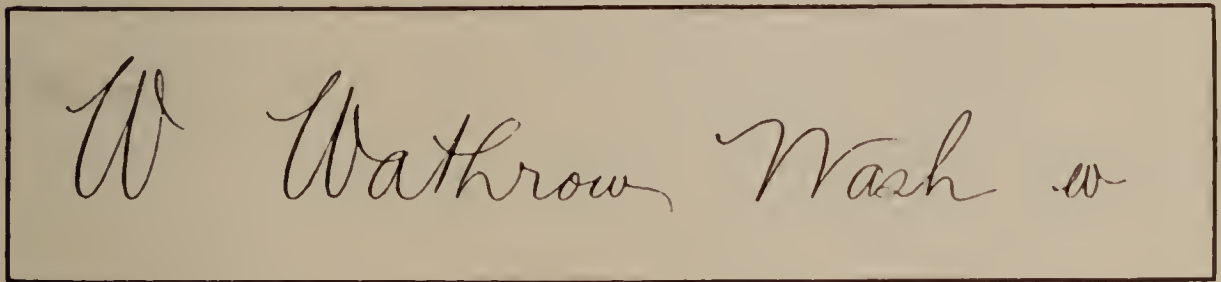
small *v*'s without lifting the pen; but, when the greatest speed is attempted, there is hardly time for finishing with the horizontal stroke, such as is attached to the ordinary style. Lifting the pen at the finish and cutting the letter separate from whatever character chances to follow, is found to be the most practical way of circumventing the difficult twist. Where the letter is begun like small *i*, and the writing line is not disconnected at the finish, care must be exercised in order to keep the construction from looking too much like *o* or *u*.



Except from the finishing strokes, there is little difference between the capitals *U* and *V*, unless the printed style of *V* is used; however, to positively “print” any of the capitals is hardly allowable when the best effect in appearance is considered—the contrast is too noticeable when harsh and straight lines are mingled here and there among so many curves. As stated, the simple and perfect capital *V* begins like capital *U* and finishes with a little reversed loop at the top. In *U*, no loop is formed where it occurs in *V*—instead, the finishing line is carried downward to the base line and turned forward at the bottom, so as to run easily into the letter following wherever such handling is required.

W

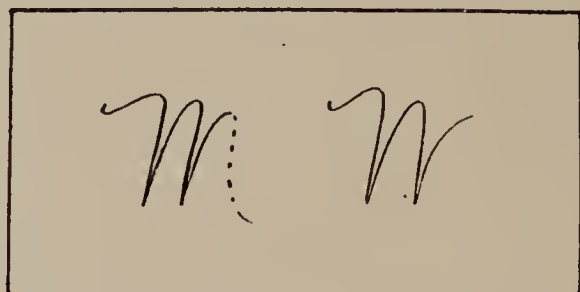
The capital and the small *W* are made very much on the same plan—making them closed, or contracted, at the top is the exactly right way to obtain their most legible effect. Because small *v* and *w* are finished alike in ordinary writing, one would naturally suppose that their finishing touches could be similarly treated when they occur in the more rapid style, but such is not the case. A little experimenting will disclose that when *v* begins like *i*, and the right-hand branch is looped at the top, so as to make the turn without lifting the pen, the letter becomes nearly a perfect *o*—a very unsatisfactory result considering the claim for the Railroad Fist to be “perfect legibility.”



While the old-fashioned capital *W* bears a nearer resemblance to the printed letter than does any other style, the one most used by the telegraphers shows a little deviation from the usual practice, for here a preference seems given to a style not so closely resembling the printed form. However, not the least in legibleness seems to be sacrificed—the preferred style apparently speaks “*W*” just as plainly as does the printed letter itself; and because its execution requires none of the circling movement towards the right, there are obvious reasons why the style ac-

cords with every principle involved. Except from being left and right, both sides should be comparatively the same in shape and size, although it is allowable and frequently more convenient to loop the branch at the finish like capital *V*. While there is no harm in giving this style a little slant, it is best, until the form is pretty well mastered, to favor a vertical build.

The finished letter should have a narrow, rather than a broad appearance.

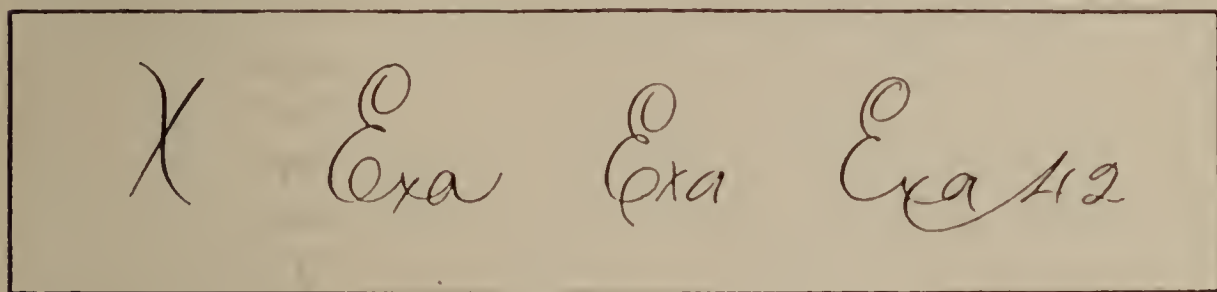


The smaller plate illustrates how one form of capital *M* makes a very good *W* simply by eliminating the last downward stroke.

X

Small *x*, like *k*, occasions some question as to just which form is more nearly standard, the question resting between two styles, the written and the printed. Where the written *x* is used, it is made like small *i* and crossed with a downward stroke—a practice which is in opposition to the opinion of the artistic penman who holds that *x* should be crossed with an upward stroke; however, as stated elsewhere, the requirements of speed and convenience differ from those of art and grace. The printed *x* is no more difficult than the written, and while it is somewhat more legible than the other form, it can hardly be

said to have the preference. Printing the letter has one advantage in that it becomes unnecessary to return to make the cross after the word is finished, the character being made complete before the pen continues on its way. Even when *x* is written, the writing line is usually disconnected on one side or the other—if on the right, the letter should be crossed before the pen is carried farther. The specimens shown are correct examples of *x* as handled by those who are admitted to be the best.



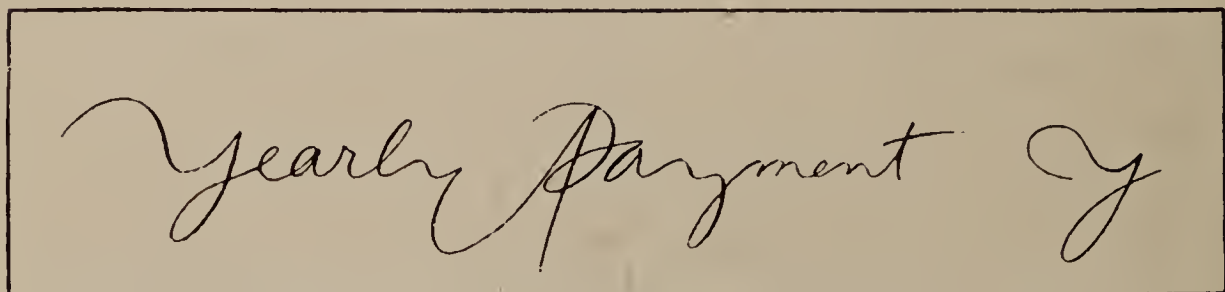
The infrequency with which the capital *X* occurs, renders its handling a matter of insignificance when compared with that of any other capital, even *Z*. Between the printed and the written forms there is very little difference, but it is best not actually to print the letter, excepting when it occurs with figures. Where its use is intended as that of a written character, such as may be required in abbreviations or other symbols, it is given the best “written” appearance by making the first downward stroke a slightly compound curve. Cross the letter from upper right to lower left.

Y

In different paragraphs elsewhere, attention has been called to the telegrapher’s apparent aversion to

the use of the left curve, especially as a beginning to any letter; but in his treatment of *y* it is observed that he deviates a little from his usual practice and condescendingly begins this letter in the ordinary way; that is, with a left curve.

Making the allowance in this instance shows very good judgment, for to begin *y* with a right instead of a left curve would greatly destroy its balance and legibleness. Small *y* occurs most frequently at the end of words, and where so located the loop should be handled identically as is the corresponding part of *g*. The top should be well drawn out, which way of handling not only has a tendency to preserve the balance of the letter, especially where the loop is carried well backwards, but, owing to the crook in the compound curve being so greatly lessened, the execution is also rendered a corresponding amount easier.



It is sometimes observed that those who write a "cramped" hand do not carry their lower loops backward to any extent, but, instead, resort to the practice of doubling them up in the middle so that the bends in the downward strokes necessarily bulge considerably ahead of the point from which they begin at the top. This is allowable to some extent; at least enough to allow the upward course of the pen to describe a near-

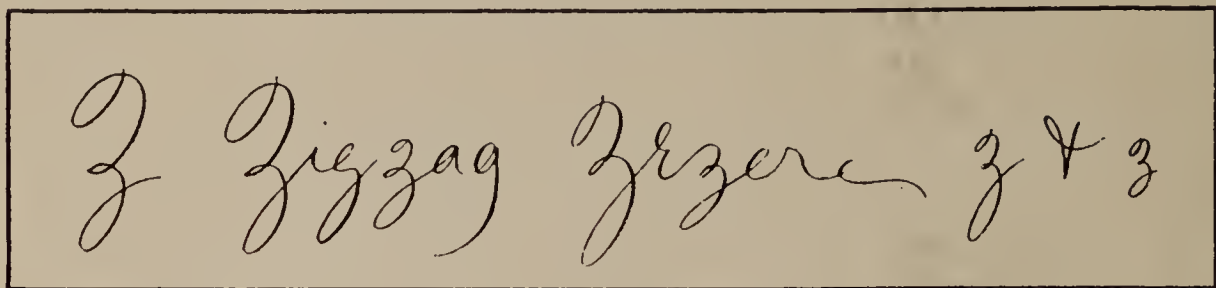
ly straight line, but the practice overdone greatly impairs the appearance of the writing. Endeavor to have the loops favor a narrow design, and the bad effect will be avoided—neither upper nor lower loops that are very full or of triangular shape are very often found in the specimens of writing submitted by the best.

What there is to say with respect to the capitals *Y* and *Z* is in main much the same as the comments concerning the lower case forms, excepting that, as the capitals are handled on a larger scale, it is usually necessary to construct them on a somewhat narrower plan so as to confine their width to a reasonable amount of line space. However, where capital *Y* occurs at the beginning of a line or sentence, it is quite the practice to treat it the same as small *y*; that is, to stretch, or widen, out the construction at the top.

Z

When making *z*, it is necessary to rotate the circling movement towards the right, and for this reason the penman who writes a rapid hand is never over zealous in practicing words in which either the upper or the lower case form is present. Through endeavors to improve the old, or to design a new style, the form from time to time has been subjected to considerable experiment; but “plain old *z*” has stood well the test of time and has much the best of any innovations frequently given trial. There is occasion here to refer again to the telegrapher’s aversion to the use of the left curve, but the employment of this principle of writing can hardly be avoided when the

regular form of *z* is used; however, admitting the letter to be a somewhat difficult one, there is little cause for annoyance when the infrequency of its occurrence is taken into consideration. In order to avoid a compound curve, *z* is not always connected to whatever letter it chances to follow, and where the writing line is so separated, the letter assumes a very close resemblance to figure 3.



&

When one takes into consideration the simplicity in construction of the character &, and the small amount of study and appliance that should suffice to enable almost any one of ordinary ability to handle the letter correctly, it is something of a wonder why so many of the average class should persist in always making their &'s entirely wrong.

Handwriting specimens chosen from among the average class of office workers usually reveal many "hit and miss" styles of the letter, but the most common error is that of making the "V" part of the construction with a loop at the bottom; and some go so far as to make the letter wrong way round, or even upside down. It appears that too many are of the opinion that almost any kind of snarl will do for & and yet, as a matter of fact, when speed and legibleness are

taken into consideration, there is really no better or easier way of turning the trick than that of making the letter exactly right. There is little difference between the printed and the written forms, except that the script style is pointed, like *V*, instead of rounded at the bottom. Begin with a somewhat narrow *V*, starting downward with the right-hand branch. Make no loop at the bottom, and carry the left side upward into a reversed loop with the finishing line crossing the main part of the construction near the center.

FIGURES

THERE is probably no other place in the business world where consequences such as are sometimes resultant from a wrong or an illegible figure can compare in the matter of cost with what some of these errors, which from one point of view are seemingly slight, have at times been accountable for in one or another of the various channels of railroading. It cannot be said however that any errors of the kind are ever allowed to creep into the business without every precaution being taken to guard against them—a thought along this line suggests further comment in the following paragraph:

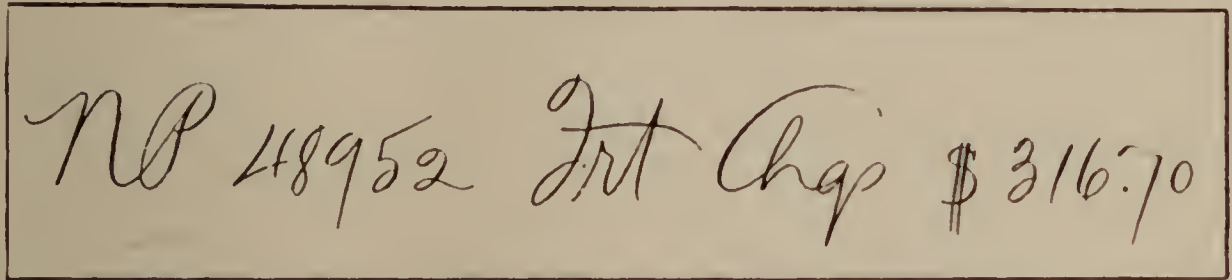
In most instances the railroad employe enters the service while comparatively young and usually remains in one or another of the different departments during his whole career of usefulness. The ability of a railroad man is judged to a considerable extent by the infrequency of his errors and mistakes; and since figures constitute a factor of so much importance in practically every branch of the service, there exists

among the thousands who together make up this extensive army of workers an endeavor to be constantly on the watch and to eliminate as far as possible any such errors as would be likely to result in unnecessary expense or, perhaps, in as much as disaster. And so, in consequence of the time and the effort that is devoted towards the accomplishment of absolute accuracy, it would be well-nigh impossible to design a more legible and mistake-proof set of numerals—that is, one to be executed with the hand and pen—than is found in every day use among those who are frequently dubbed “the old rails.”

The operator, like the short-hand writer, uses no abbreviated forms for figures—“the plainer the better” seems to be the maxim. However, in the matter of time, it is in no way necessary for the operator to resort to the use of any particular “short-cuts” when copying figures—these characters must of necessity be transmitted to him separately and not jumbled together nor grouped into combinations as is so much the case with letters and words. For this reason, the penman of average ability usually has plenty of time to write his figures carefully, even when the sending is pretty fast.

All authorities on writing agree in that figures should always be made small and never connected. However, whether made small or otherwise, they should at least be kept from anything like touching or overlapping; consequently, in order to be kept from occupying too much line space, it follows, obviously, that figures *must* be made small in order to be kept far enough apart. Where the writing is

done in books and on blanks that have been ruled especially for the purpose, figures can still be made large enough to evidence ease in their execution without any part of their constructions touching the ruled lines, unless, perhaps, it chanced to be an occasional downward stroke of 7 or 9. If figures are made so large as to overlap the rulings, the effect is much the same as when lines are intentionally drawn through them for the purpose of obliteration; consequently, it should be understood that their legibleness will always be more or less impaired when they are not kept well within the space intended for them.



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Make figures almost entirely with the finger movement—the hand may be rocked to some extent, but the energy exercised in manipulating the pen or pencil should function from the fingers alone. Execute them with a quick and snappy action, and practice on the proper forms until they are made correctly from habit rather than because thought is given to just where every line and angle should be drawn. Bear in mind, however, that one must not suppose that the hand of its own accord will form any of the characters correctly, except occasionally by accident, unless there has been previously fixed in the mind a mental picture of the exact form that is desired of the hand to execute. Make figures on a nearly ver-

tical build—there should be only enough slant to keep them from having too much of a mechanically drawn appearance; also, the stems of the 1's, 7's, and 9's, when in columns, should never be allowed to "connect up" in perpendicular lines. On the other hand, it is not always easy for every one to make columns look even and straight when the figures are slanted as much as is necessary where one is governed by the old-time principles taught by the school-ma'ams.

1: Just a snappy downward movement of the fingers make the figure 1. The heaviest pressure of the pen should be at or near the top and diminish uniformly as the pen is carried downward. Do not make this figure with the little "upstart" at the top, like printed 1—such figure 1's are sometime mistaken for 7's.

2: Figure 2 begins like the ordinary style and may be finished either with or without the compound curve at the bottom—the tendency with the "ops" is to consider the figure completed with the downward turn, although a little twist of the fingers produces the compound curve practically as well. Where space is limited, the first mentioned way has the preference.

3: The operator's 3 is very much like the lower case *z*, except not quite so much elongated. Care should be taken to finish with a uniformly curved flourish—figure 3's never look right unless the finishing flourish is as neatly executed as the flourished end of the capital stem in any capital form.

4: Make the angled part of figure 4 first, then finish with a snappy downward stroke correspond-

ing with the action employed in making figure 1. When the angle is made square, or nearly so, the figure is given a somewhat better appearance by curving the main downward stroke slightly towards the left with most of the bend in the upper half. Where the angle is more acute, so that the completed figure has much the appearance of a printed 4, the main downward stroke should stand practically vertical and must not be curved. In very rare instances the printed form is actually used, and, where such is the practice, the standard is started upwards from the bottom; but the reversed movement and the numerous angles to be turned make the style too impracticable for ordinary usage.

5: Begin with a short and *straight* downward line and finish like the lower part of 3, observing the same particulars with regard to the flourish. It is not imperative that the finishing line at the top be made horizontal—by bringing into play the operator's favorite side-swipe movement, the line may be inclined upwards as much as 45 degrees where one so prefers. The execution of this line is identical with that of crossing *t*—a reference to the different examples illustrated will disclose that not all the *t*'s are crossed horizontally, except where it is desired to carry the line directly forward so as to combine the action with some other requirement.

6: The writer once had acquaintance with a lad at school who, regardless of all instruction received to the contrary, would persist in making his *6*'s by starting with the loop at the bottom; but as that unfortunate youth departed all his troubles many years

ago, it is doubtful if there is left in the world today one other person who has ever resorted to the same unusual practice; therefore, it is not believed necessary to give any instruction here with regard to just which way one properly begins the figure 6. It should be added, nevertheless, that it is not allowable to be "skimpy" with certain parts of the different numerals if they are to stand out with the desirable amount of boldness, and the loop of figure 6 is one example. The others include the square of 4, the lower part of 5, the horizontal line of 7, and the oval of 9.

7: The top of the operator's capital *T* bears a close resemblance to the corresponding part of his figure 7—a style that could never be misread. The figure should not be made with the little downward stroke at the outer end of the horizontal part—too many 7's of that type, when carelessly made, have been mistaken for poorly made 4's or 9's. Make the downward stroke of 7 with the quick and snappy action of the fingers, practically as in figure 1.

8: A very common error in the way of making 8 is by starting with a nearly straight downward line, the same as one properly begins the 6; whereas, like the letter *S* the figure 8 properly begins by carrying the line towards the left from the starting point, and the straighter part of the construction should be made with the upward stroke at the finish. Where 8 is constructed in the wrong way, there is always a tendency to make the turn too sharp at the upper left quarter, after which it is necessary to finish with a nearly straight and horizontal line towards the right.

9: Begin 9 with a liberal sized oval and finish with

a snap like figure 1. Remember that when handling figures in accordance with the improved method, the downward strokes of 1, 4, 7, and 9 are executed in a way somewhat different from that which is customarily taught in the graded school—the truly rapid penman, when properly applying his craft, never brings the downward strokes to a positive stop at the bottom. As has been shown, the pen is carried downward with a snap and forward to the following figure or letter without the sign of a check in the movement.

When figures are made with a pen, one should endeavor to bring into play exactly the same action as when a pencil or a stylus is used. An excellent thing in practice is to make a line or two of figures with pencil, then with pen and ink to do likewise again, endeavoring to keep the action and touch the same at all times. One should not become any discouraged if the pen shows an inclination to scratch a little at the first few trials of this experiment—the scratching will gradually disappear as the fingers and hand become better acquainted with and adapt themselves to the proper grip and action. A light and artistic touch is an admirable accomplishment in writing; but figures, in order to look right, must bear the appearance of having been put down with confidence and precision—we cannot feel so sure that they are as truthful as reputed when there apparently is weakness and faltering in the way they voice their claims.

GENERAL

WHEN only ordinary specimens of the "Rail-road Fist" are first brought to the attention of one who is entirely unacquainted with the characteristic features of the style, the scrutiny is not always followed by any great burst of enthusiasm; but when one considers that the stranger to the style is usually the individual from the old school—that abode of strictness where the eye is never trained to see good qualities in handwriting unless the uniformity is almost above criticism in every way—it can hardly be supposed that observance from such a view point can at first approve of a style where the matter of uniformity, if not altogether disregarded, is, to say the most, never given more than a very slight consideration.

There are a few types of the telegraphic script that in some respects bear considerable resemblance to the style of vertical writing which was introduced with but little success by various educational bureaus some twenty years ago; but there are obvious reasons why the vertical writing should be a failure where the telegraphic style is a greater success in business channels than any other idea of long hand writing that has as yet been conceived. In the first place, the advocates of the vertical system attempted to teach with it the full arm movement, but it since has been satisfactorily demonstrated that the vertical style cannot be handled so successfully as can the slanting style when the full arm movement is employed—apparently the swing of the arm does not come in the

right direction. In lower grades at school, where entire finger movement is allowable, very encouraging results can be obtained with vertical writing; but in the intermediate and higher grades—where pupils are required to “speed up” and the teachers begin to insist more upon having full arm movement—right away there is evidence that something is wrong with the method. Again, the principle of the system required that all the downward strokes of the pen should be described exactly vertical, the pen to be traveled from left to right with the upward strokes only. The least deviation from “plumb” is much easier discerned than the same or even a greater variance of degree in a slanted line; therefore, the extreme difficulty in keeping all the downward strokes exactly vertical and straight enough to conform with a definite system, was another feature of the vertical style that had much to do with its failure.

But to return to the subject—In the year nineteen seventeen, there was conducted in the columns of the Railroad Man's Magazine a telegraphic penmanship contest in which railroad and commercial telegraphers from nearly every quarter of the globe participated; and through courtesy of The Frank A. Munsey company, once publishers of that popular periodical, the writer has been granted permission to reproduce in this work a desired number of the prize winning specimens which were published in the contest series.

The copy shown on the opposite page, which was awarded first prize, is undisputably an excellent specimen of typically telegraphic chirography; but, in the opinion of the author, the writing appears to

This is a specimen of telegraphers pen-
manship submitted to the editor of the Telegraph
and Telephone Department of the Railroad
Manual Magazine in the year nineteen hundred
and seven.

have been executed with a little too much painstaking, so that the exactness, which it seems almost unfair to brand a fault, gives to the copy a close appearance of having been printed from script type, instead of reproduced as it first was from actual handwriting.

Observe that in most places each letter begins anew; whereas, taking into consideration the form of the letter immediately preceding or following, it should not have been necessary to lift the pen. Note this particularly of the way the small e's are handled. In some words the line is disconnected between every letter, but the pen lifting has not been occasioned because of any circular movement around the different characters—it appears to be simply a case of finish one and begin another. Nevertheless, the specimen is in other respects an excellent example of the telegraphic hand, and the “op” who pastes it in his hat will make no mistake. The specimen was submitted by Benj. H. Tidrick, who in 1917 was a telegrapher of Indianapolis, Ind.

As has been previously stated, it is not the purpose of this work to offer any great part of the specimen writing for “set copy”—that is, not more at any rate than may suit the fancy of the student to accept—nor have any of the plates been designed with a view to showing displays such as in other fields are termed “elegance in writing.” However, those who wish to learn, if willing to be advised, cannot go far astray by endeavoring to have their handwriting conform closely in appearance with any of the three following specimens which were submitted by telegraphers

L. M. McCormick, E. M. Shaler, and E. R. Wakefield, respectively.

These specimens have more of that appearance which the writing assumes when copied "right from the sounder;" and the ability to execute with the proper knack such a style to a nicety is the accomplishment this work endeavors to teach. These copies have been selected because of the three distinctly different types illustrated. The first evidences a uniformly light touch. The second, while illustrating what usually would class with the heavier hands, shows the touch to have been somewhat "springy." The third is "heavy" throughout, the line being practically uniform in both upward and downward directions; however, the style of pen used undoubtedly had much to do with this effect.

The inserted sample telegram may appear to be somewhat "overdone," but it has been so designed in order to include all the letters of the alphabet, both upper and lower case, all the numerals, and a few special forms. In several instances the same letter has been handled in different ways—not merely as a matter of fancy, but mostly for the reason that a different principle has been brought into play in each particular case. Not all the saving of time and effort that is taken advantage of by those who employ this system of writing is at first revealed when one has no more than the writing itself to look to for the evidence of this skill; that is, unless the scrutiny is by one thoroughly conversant with the principles involved. It is not usually noticed by the lay observer that the forms of the telegraphic pen characters are

This is a specimen of telegraphers
penmanship submitted to the Editor
of the Telegraph and Telephone Department
of the Railroad News Magazine in the
year nineteen hundred and seventeen

This is a specimen of telegraphers' penmanship submitted to the editor of the Telegraph and Telephone Department of the Railroad Man's Magazine in the year nineteen hundred and seventeen.

I succeeded in making a
living putting 5 on a
line with this "Operators
First" In the days gone
by. If it were to
finish "in the money" in
this contest I would be
both gratified and surprised

governed, not so much by any plan bearing upon the build of the letters within themselves, as by an effect depending on the direction from which the pen is carried into, or to which it is carried out of the different constructions. This is one of the features having much to do with the characteristic appearance of the style—the same letter frequently varies much in form, the variation depending much upon the word in which it chances to occur. In the specimen writing here, attention is called to the different forms of the small letters d, e, f, g, h, k, o, p, and s, the various designs of which have been included in the illustration because of the frequency of their appearance in the every-day handwriting of the telegraphers.

Other characteristic features of the telegraphic style can be observed by the liberal spacing between the words, and in the lack of uniformity in size and slant—the latter features, however, governed by principles in nearly every instance. The liberal spacing not only adds greatly to the legibleness, but, owing to the effect it has in removing the bad appearance otherwise conspicuous because of the variance in slant, also does wonders for the general appearance of the writing. Note that where words are tied together—a practice sometimes overdone—the line is never carried to a small letter nor to a figure, but only to an occasional capital. Also observe that although a single word may contain letters of several different sizes, the variations in this respect are evidenced as a matter of height; that is, all scragginess occasioned thereby appears only along the tops—the bottoms of the small letters, for the best appear-

St Paul 28th

J K Graham

Ashland Minn

X24 Passed Hoquiam Oct 7th BVO 146532

Zerophia Sep 29th WB 46 Lbr Consigned Rex Mill
Works Fort Wayne Ind Divert to Leakjoy Mfg Co
New Leipzig Ohio via Wabash Chgo PM Ry to destn
adding \$5 for Rb Quick action Advice done

U-230

Voyager 813 PM

ance, should always rest as nearly as possible upon an exactly straight line, whether it is one drawn or imaginary. As is the case with a typewriter, it is an utter impossibility to produce neat appearing work when the machine is out of alignment. The principle is the same elsewhere—neither writing nor printing can look the best, no matter how perfectly formed may be the characters, when the alignment is poor.

Dearth of punctuation is also noticeable, but this is offset to a considerable extent by an elaborate use of capitals—neither periods nor commas seem so much required where all the statements are short and are capitalized, as also are many of the most important words. When copying word by word, the average telegrapher often finds it somewhat difficult to carry in the mind a proper sense of syntactical construction, especially when the wording is purposely written with many irregular ellipses, as is usually the practice wherever communications are to be transmitted by telegraph; and so, this fact probably accounts to a great extent for the custom that the telegrapher has for a promiscuous use of capitals—no particular harm is done by throwing in an occasional unnecessary capital, but to leave one out where its use has been intended would be almost ruinous. Even when the words from the sounder are being copied and understood in their proper sense, it is not always possible to anticipate enough of what is coming to enable one to tell just where the capitals should or should not be used; therefore, the general practice is to “play safe” and “use ’em plenty.” Very often, too, the

capital is used merely because the letter chances to be of such design that the pen more conveniently swings into the upper rather than the lower case form.

In the matter of flourishing, it can be said that the lower left-hand flourish, which is practically the only one used, is not in any way a superfluity, since it is very seldom that any of the capitals are appendaged with this principle merely for the sake of decoration. Its use in most instances is required in order to complete the construction of whatever letter it chances to form a part; and where in a few instances it possibly could be dispensed with, it is usually no more than the course over which the point of the pen is carried when the movement is changed from a backward to a forward direction. The lower right-hand flourish, such as is so easily attached to capitals ending like A, M, and a few others, because of being purely a decorative feature, is rarely if ever used excepting in the instance where the cyma of capital L is occasionally given a little touch of superfluity. The lower left-hand flourish, first referred to, has been given some attention under the remarks on the capital stem. It was here explained that the oval of the flourish is usually constructed on a slanting instead of a horizontal plan, and there are two reasons why this should be the case: First, the slanting curves are more easily executed than are the horizontal when either the swaying or the side-rocking movement of the hand is employed. Second, the slanted oval is of such form that its finishing line allows the pen to leave off while traveling in a direction

“straight ahead;” whereas, when the oval is made horizontal, the finishing stroke requires more or less of a downward course, depending on whether the oblong is full or narrow.

In the matter of learning to write merely what is usually termed “a good hand,” it may be said that there are a great many persons in the world today who would write much better than they do were it not for the fact that, unless one makes a particular study of the matter in hand, it is always somewhat difficult for the average individual to see the lesser imperfections in his own art or handicraft. This statement reminds the writer of the fact that he once knew a man who claimed the distinction of being the “poorest writer in the world, but”—as he always added—“there’s one thing about her that I can say for myself—‘she’s always just as easy to read as print.’” Any one who had ever seen a specimen of this individual’s handwriting would willingly concede that for the first part of his assertion there was considerable ground upon which he was entitled to base his claim; but the critic who, conscientiously, ever awarded the writing any further marks of credit, must indeed have been adept at reading between the lines.

And there are others. Many like the individual mentioned would possibly strive to improve their handwriting were it not so nearly impossible for them to see their own homely scrawls as they appear to anybody else. In other words, they fail to take into consideration the fact that they seldom have the privilege of reviewing their own specimens of hand-

writing when the deciphering is not considerably aided by a recollection of what has been written. Again, owing to an inclination usually so adverse to anything like the study of penmanship, practically all the writing such persons ever perform is only when positive necessity demands it; and, consequently, when the individual of this class labors under the belief that his style of chirography—if so it may be called—is “good enough,” there is little wonder that deterioration rather than improvement is usually the safest gamble.

And so, one should not be too positive that a creditably legible hand has been acquired nor overstocked with belief in the eyes, for memory or knowledge of what has been written may be supplying much of what the eye sees only in imagination. In order to avoid being misled by any such delusion, the safest plan is to study one's own hand occasionally, and once in every little while to give a page of the written work a thorough reviewing. A little practice on a few of the most difficult combinations, if nothing more, will help considerably; at least, much more than no practice at all. Also, improvement is sure to follow if one will but pause occasionally and take pains with some particular character instead of always allowing the hand and fingers to jog along at random.

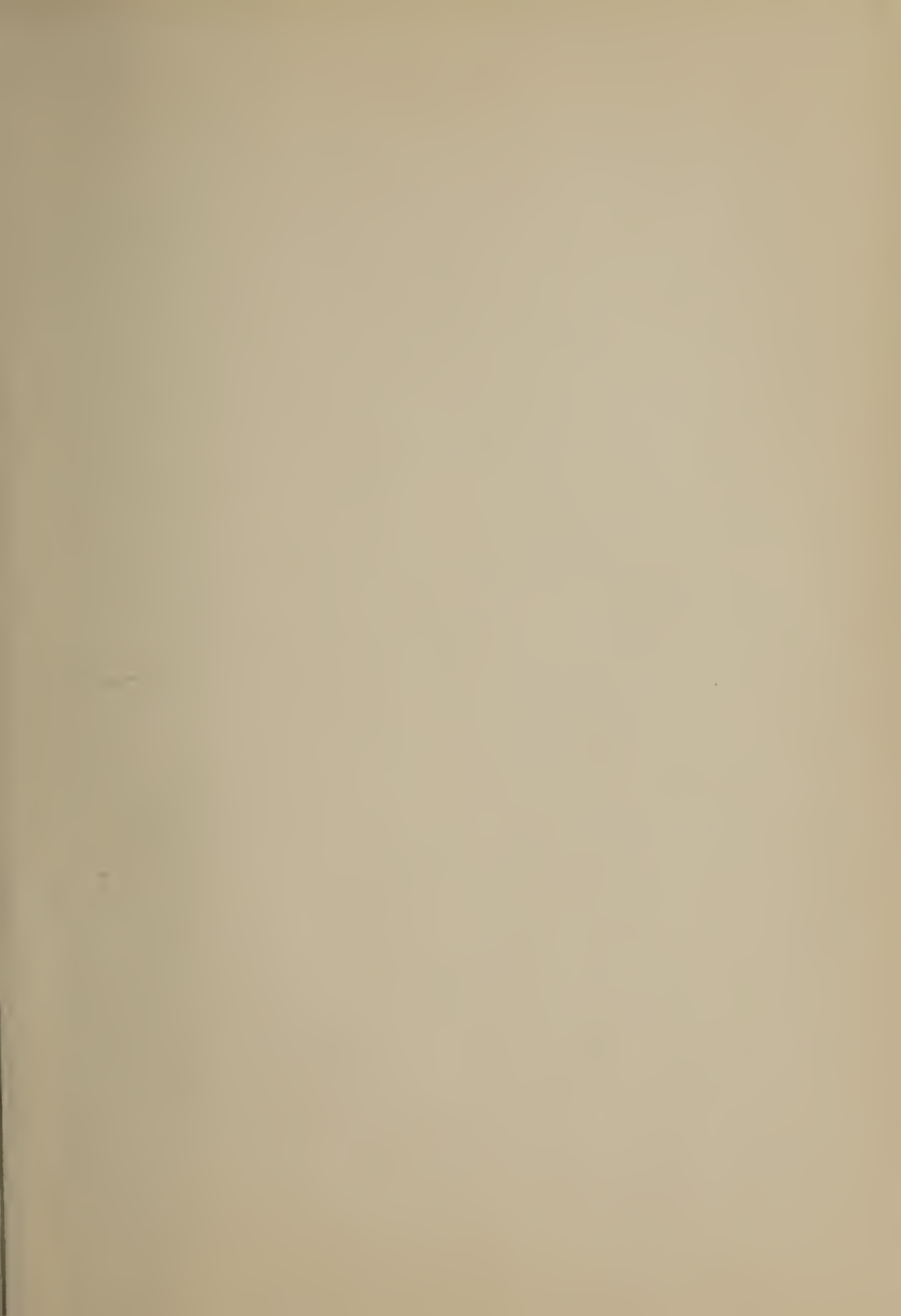
Again, there are many who like to write and who really do take up the pen occasionally for nothing more than practice, but they are often too fond of devoting the time only to easy forms or to a few other such words and characters as chance to be their favor-

ites. This is wrong. In order to have a field uniformly smooth, the greatest amount of harrowing must be done on the roughest ground.

When we consider that for one to learn to write like the artist, or professional, usually means years of practice—most professionals are overtaken by the grim reaper while still practicing in order to improve the hand—one is likely to become discouraged and think, “The task is too great—why attempt learning to write well at all!” But such conclusion is grossly erroneous. Any one who strives to do so can acquire a hand so neat and legible as to awaken admiration wherever seen without more practice than is usually obtained in ordinary office work. Bear in mind that the writing can comprise every desirable quality of merit without bearing the slightest resemblance to the artistic or ornate style.

In conclusion, it can be stated that the foregoing lessons and suggestions have been designed with a view to aiding, not only the telegrapher, but any one who lacks both the time and the inclination to practice in the way that the professional learns his art, and who cannot but experience a desire to acquire a perfectly legible and practical style of handwriting while merely “going along.” And for such of those who, owing to their penmanship difficulties, are somewhat handicapped in the matter of keeping “in the swim,” and who extend a hand to receive this volume with expectation of being benefited thereby, there is a hope that the move will result, not in any such way as would a grasp for the proverbial straw, but in

more than suitably requiting the pains. At any rate, such will be the end if the good wishes of the author are to be of any avail.



Voss/3-10

